DSC-H1

SERVICE MANUAL

LEVEL 2

Ver 1.0 2005. 04
Revision History

How to use
Acrobat Reader

Internal memory
ON BOARD

DSC-H1

US Model
Canadian Model
AEP Model
UK Model
E Model
Hong Kong Model
Australian Model
Chinese Model
Japanese Model
Korea Model
Tourist Model

Link

SPECIFICATIONS	BLOCK DIAGRAMS	PRINTED WIRING BOARDS
SERVICE NOTE	FRAME SCHEMATIC DIAGRAMS	REPAIR PARTS LIST
DISASSEMBLY	SCHEMATIC DIAGRAMS	

- For ADJUSTMENTS (SECTION 6), refer to SERVICE MANUAL, ADJ (9-876-880-51).
- For INSTRUCTION MANUAL, refer to SERVICE MANUAL, LEVEL 1 (9-876-880-41).
- Reference number search on printed wiring boards is available.

On the CH-169 and SY-127 board

This service manual provides the information that is premised the circuit board replacement service and not intended repair inside the SY-127 board.

Therefore, schematic diagram, printed wiring board, mounted parts location and electrical parts list of the SY-127 board are not shown.

The following pages are not shown.

Schematic diagram ..... Pages 4-21 to 4-44
Printed wiring board ..... Pages 4-55 to 4-60
Waveforms ..... Page 4-62
Mounted parts location ..... Page 4-64
Electrical parts list ..... Pages 5-14 to 5-18

DIGITAL STILL CAMERA

SONY®

DSC-H1
9-876-880-31

Sony EMCS Co.

2005D1600-1

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Published by DI Technical Support Section

Self Diagnosis Supported model

Cyber-shot Digital Still Camera

MEMORY STICK TM

SPECIFICATIONS

Camera

[System]

Image device 7.19 mm (1/2.5 type) color CCD, Primary color filter

Total pixel number of camera
Approx. 5 255 000 pixels

Effective pixel number of camera
Approx. 5 127 000 pixels

Lens 12 zoom lens
f = 6.0 - 72.0 mm (36 - 432 mm when converted to a 35 mm still camera)
F2.8 - 3.7

Exposure control Automatic exposure, Shutter speed priority, Aperture priority, Manual exposure, Scene Selection (7 modes)

White balance Automatic, Daylight, Cloudy, Fluorescent, Incandescent, Flash, One push

File format (DCF compliant)
Still images: Exif Ver. 2.2 JPEG compliant, DPOF compatible
Movies: MPEG1 compliant (Monaural)

Recording media Internal memory 32 MB
"Memory Stick"

Flash Recommended distance (ISO set to Auto): 0.3 m to 6.8 m (11 26/32 inches to 22 feet 3 23/32 inches) (W)/0.9 m to 5.2 m (2 feet 11 14/32 inches to 17 feet 23/32 inches) (T)

Viewfinder Electric viewfinder (color)

[Input and Output connectors]

A/V OUT (MONO) jack (Monaural)
Minijack
Video: 1 Vp-p, 75 , unbalanced, sync negative
Audio: 327 mV (at a 47 k load)
Output impedance 2.2 k

USB jack mini-B

USB communication
Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel 6.2 cm (2.5 type) TFT drive

Total number of dots
115 200 (480x240) dots

[Finder]

LCD panel 0.75 cm (0.3 type) TFT drive

Total number of dots
115 200 (480x240) dots

[Power, general]

Power HR 15/51:HR6 (size AA) Nickel-Metal Hydride batteries (2), 2.4 V
ZR6 (size AA) Oxy Nickel Primary Battery (2, not supplied), 3 V
AC-LS5K AC Adaptor (not supplied), 4.2 V

Power consumption
(during shooting with the LCD screen)
1.8 W

Operating temperature
0°C to +40°C (+32°F to +104°F)

Storage temperature
–20°C to +60°C (–4°F to +140°F)

Dimensions 108x81.4x91.2 mm (4 1/4x 31/4x 35/8 inches) (W/H/D, excluding maximum protrusions)

Mass Approx. 590.8 g (1 lb 20.8 oz) (including two batterries, shoulder strap, adaptor ring, lens hood, lens cap, etc.)

Microphone Electret condenser microphone

Speaker Dynamic speaker

Exif Print Compatible

PRINT Image Matching III
Compatible

PictBridge Compatible

BC-CS2A/CS2B Ni-MH battery charger

Power requirements
AC 100 to 240 V, 50/60 Hz, 3 W

Output voltage AA: DC 1.4V 400 mAx2
AAA: DC 1.4 V 160 mAx2

Operating temperature
0°C to +40°C (+32°F to +104°F)

Storage temperature
–20°C to +60°C (–4°F to +140°F)

Dimensions Approx. 71x30x91 mm (2 7/8x 13/16x 35/8 inches) (W/H/D)

Mass Approx. 90 g (3 oz)

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270˚C during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

CAUTION :
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

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Shematic diagram of the CH-169 and SY-127 board are not shown.
Pages from 4-21 to 4-44 are not shown.

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Printed wiring board of the CH-169 and SY-127 board are not shown.
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Waveforms of the SY-127 board are not shown.
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Mounted parts location of the SY-127 board is not shown.
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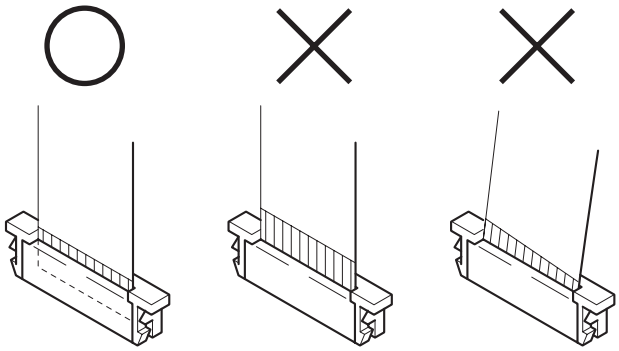
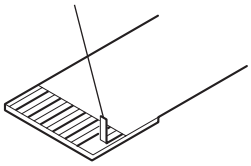
1. SERVICE NOTE

• NOTE FOR REPAIR

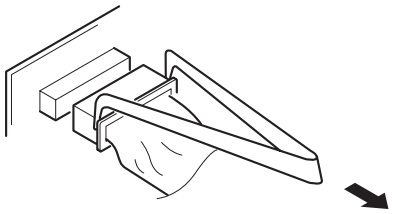
Make sure that the flat cable and flexible board are not cracked of bent at the terminal.
Do not insert the cable insufficiently nor crookedly.



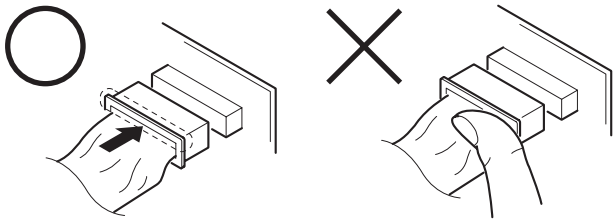
Cut and remove the part of gilt which comes off at the point. (Take care that there are some pieces of gilt left inside)



When remove a connector, don't pull at wire of connector. Be in danger of the snapping of a wire.

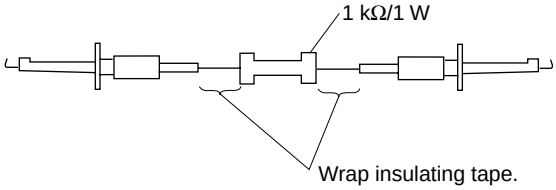


When installing a connector, don't press down at wire of connector. Be in danger of the snapping of a wire.



[Discharging of the FLASH unit's charging capacitor]

The charging capacitor of the FLASH unit is charged up to the maximum 300 V potential.
There is a danger of electric shock by this high voltage when the capacitor is handled by hand. The electric shock is caused by the charged voltage which is kept without discharging when the main power of the DSC-H1 is simply turned off. Therefore, the remaining voltage must be discharged as described below.

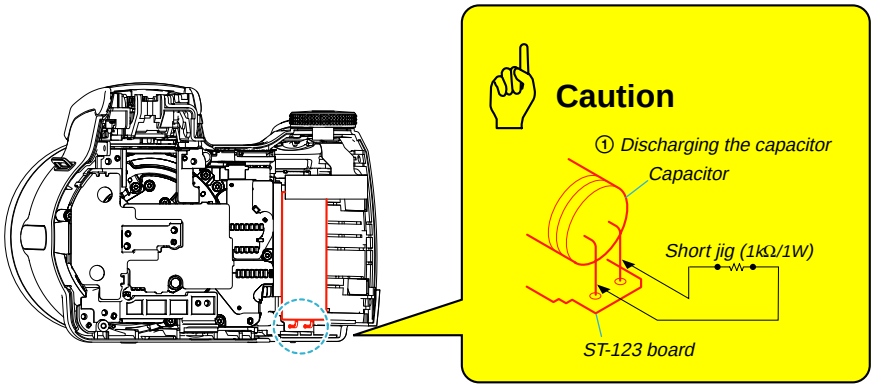


Preparing the Short Jig

To preparing the short jig. a small clip is attached to each end of a resistor of 1 kΩ /1 W (1-215-869-11)
Wrap insulating tape fully around the leads of the resistor to prevent electrical shock.

Discharging the Capacitor

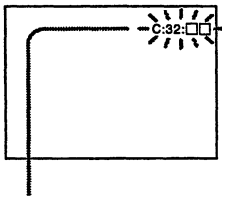
① Remove the main section.
② Discharge the capacitor on the ST-123 board for about 10 seconds by using the short jig.



[Description on Self-diagnosis Display]

Self-diagnosis display

The camera has a self-diagnosis display. This function displays the camera condition with five-digits (a combination of a letter and figures) on the LCD screen. If this occurs check the following code chart. The five-digits display informs you of the camera's current condition. The last two digits (indicated by □□) will differ depending on the state of the camera.



Self-diagnosis display

• C: □□: □□
The contents which can be handled by customer, are displayed.
• E: □□: □□
The contents which can be handled by engineer, are displayed.

Display Code	Countermeasure	Cause	Caution Display During Error
C:32:01	Turn off the main power then back on.	Trouble with hardware.	SYSTEM ERROR
C:13:01	Replace the memory stick. Format the memory stick with the DSC-H1.	• The type of memory stick that cannot be used by this machine, is inserted. • Data is damaged. • Unformatted memory stick is inserted.	MS ERROR
E:91:01	Checking of flash unit or replacement of flash unit.	Abnormality when flash is being charged.	Flash LED Flash display Flashing at 3.2 Hz
E:01:XX	Checking of lens drive circuit	When failed in the focus initialization.	—
E:61:00 *1			
E:61:10 *1			

Note : The error code is cleared if the battery is removed, except defective flash unit.
*1: The error display is given in two ways.

• METHOD FOR COPYING OR ERASING THE DATA IN INTERNAL MEMORY

The data can be copied/erased by the operations on the Setup screen. (When erasing the data, execute formatting the internal memory.)

Note: 1 When replacing the SY-127 board, erase the data in internal memory of the board before replacement.
Note: 2 When replacing the SY-127 board or the IC381 on the SY-127 board, execute formatting and initialize the internal memory after replacement.

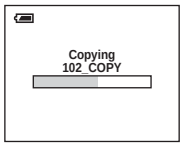
Method for Copying the Data in Internal Memory

Copy

Copies all images in the internal memory to a "Memory Stick".

	OK	See the following procedure.
✓	Cancel	Cancels the copying.

① Insert a "Memory Stick" having 32 MB or larger capacity.
② Select [OK] with ▲ on the control button, then press ●.
The message "All data in internal memory will be copied Ready?" appears.
③ Select [OK] with ▲ , then press ●.
Copying starts.



Use batteries with enough capacity or the AC Adaptor (not supplied). If you attempt to copy image files using batteries with little remaining capacity, the batteries may run out, causing copying to fail or possibly corrupting the data.
You cannot copy individual images.
The original images in the internal memory are retained even after copying. To delete the contents of the internal memory, remove the "Memory Stick" after copying, then execute the [Format] command in Internal Memory Tool.
You cannot select a folder copied on a "Memory Stick".
The setting of (Print order) marks is not copied even when you copy data.

Method for Formatting the Internal Memory

Format

Formats the internal memory.
Note that formatting irrevocably erases all data in the internal memory, including even protected images.

	OK	See the following procedure.
✓	Cancel	Cancels the formatting.

① Select [OK] with ▲ on the control button, then press ●.
The message "All data in internal memory will be erased Ready?" appears.
② Select [OK] with ▲, then press ●.
The format is complete.

• PROCESS AFTER FIXING FLASH ERROR

When "FLASH error" (Self-diagnosis Code E : 91 : **) occurs, to prevent any abnormal situation caused by high voltage, setting of the flash is changed automatically to disabling charge and flash setting.
After fixing, this setting needs to be deactivated. Flash error code can be initialized by the operations on the Setup screen.

Method for Initializing the Flash Error Code

Initialize

Initializes the setting to the default setting.

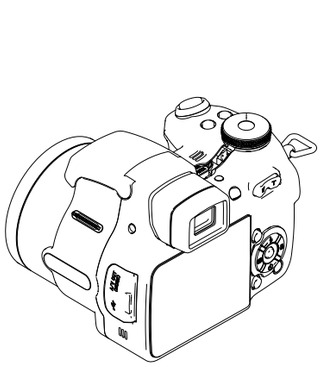
	OK	See the following procedure.
✓	Cancel	Cancels the resetting.

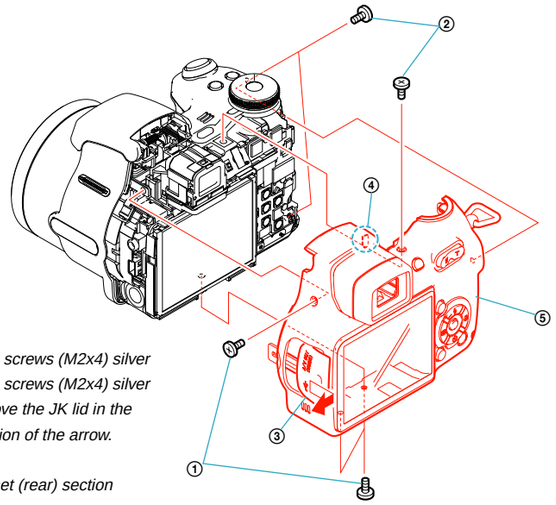
① Select [OK] with ▲ on the control button, then press ●.
The message "Initialize all settings Ready?" appears.
② Select [OK] with ▲, then press ●.
The settings are reset to the default setting.
Make sure that the power is not disconnected during resetting.

2. DISASSEMBLY

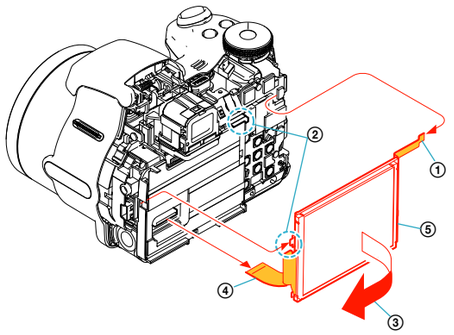
The following flow chart shows the disassembly procedure.

2-1. DISASSEMBLY

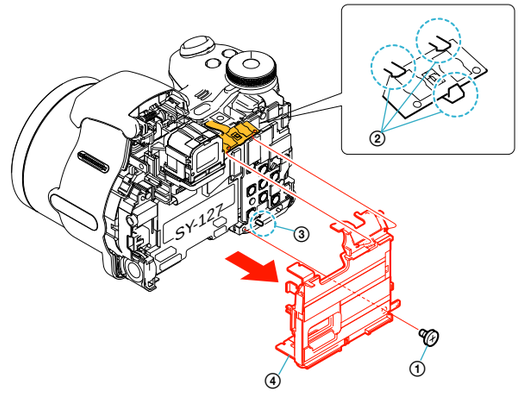




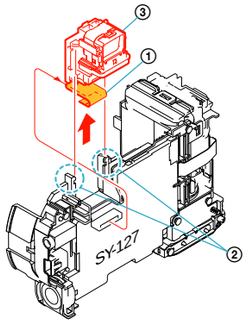
① *Three screws (M2x4) silver*
② *Three screws (M2x4) silver*
③ *Remove the JK lid in the direction of the arrow.*
④ *Claw*
⑤ *Cabinet (rear) section*



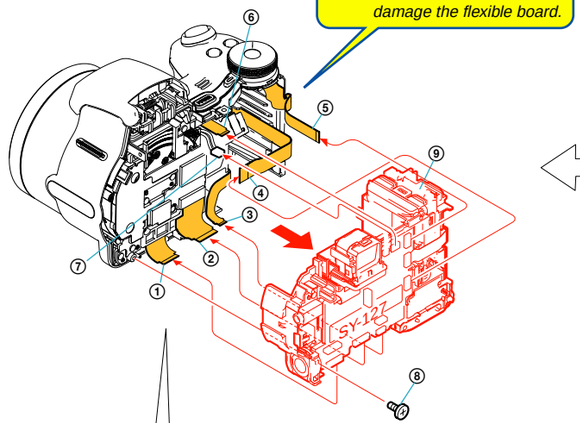
① *Light guide plate (2.5) block*
② *Two claws*
③ *Remove the LCD, Light guide plate (2.5) block in the direction of the arrow.*
④ *LCD unit*
⑤ *LCD unit, Light guide plate (2.5) block*



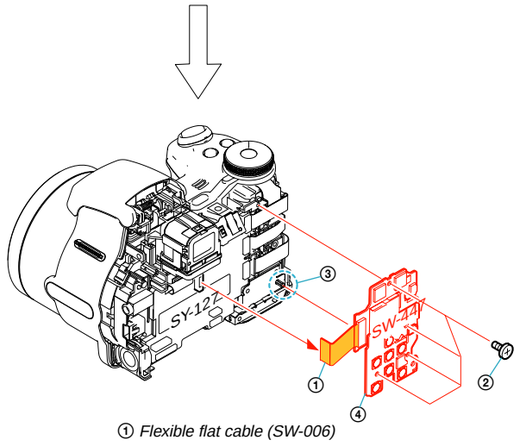
① *Tapping screw (M1.7x4) black*
② *Three claws*
③ *Claw*
④ *LCD frame assembly*



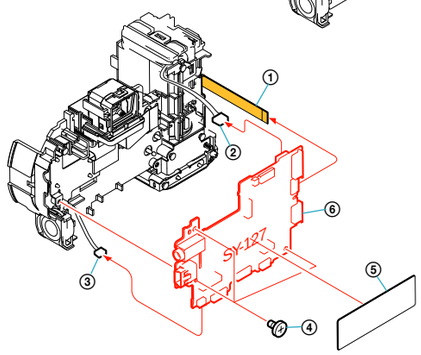
① *EV-016 board*
② *Two claws*
③ *EVF section*



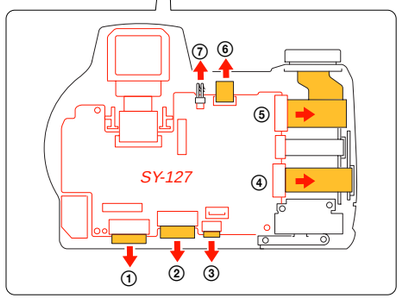
Note: *Be very careful not to damage the flexible board.*



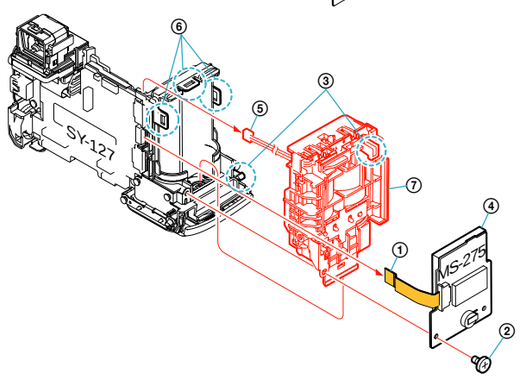
① *Flexible flat cable (SW-006)*
② *Four tapping screws (M1.7x4) black*
③ *Claw*
④ *SW-447 board*



① *Flexible flat cable (MS-029)*
② *Battery connector*
③ *From the loudspeaker*
④ *Three tapping screws (M1.7x4) black*
⑤ *Fuse replacement caution label*
⑥ *SY-127 board*



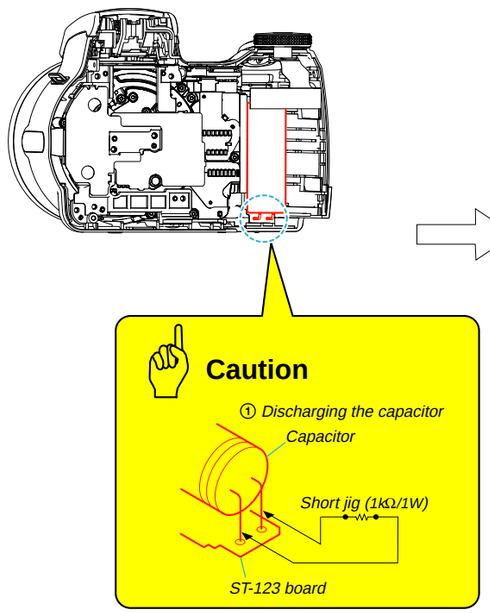
① *From the lens flexible board*
② *FP-224 flexible board*
③ *From the lens flexible board*
④ *Flexible flat cable (ST-001)*
⑤ *Control switch block (SW51780)*
⑥ *AF-102 flexible board*
⑦ *From the microphone*
⑧ *Tapping screw (M1.7x4) black*
⑨ *Main section*

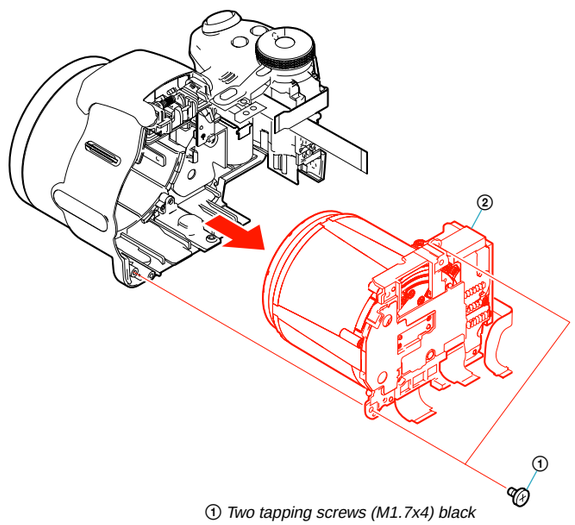


① *Flexible flat cable (MS-029)*
② *Tapping screw (M1.7x4) black*
③ *Two claws*
④ *MS-275 board*
⑤ *Battery connector*
⑥ *Three claws*
⑦ *Battery terminal board*

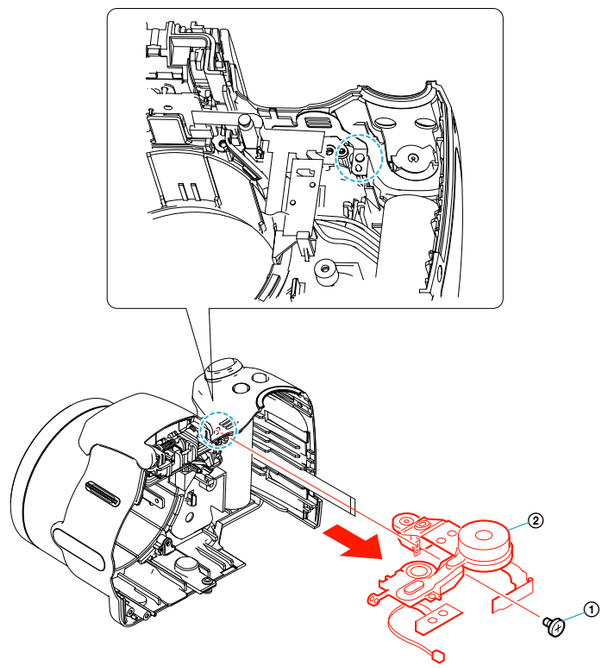
ST section (See page 2-3.)

2. DISASSEMBLY

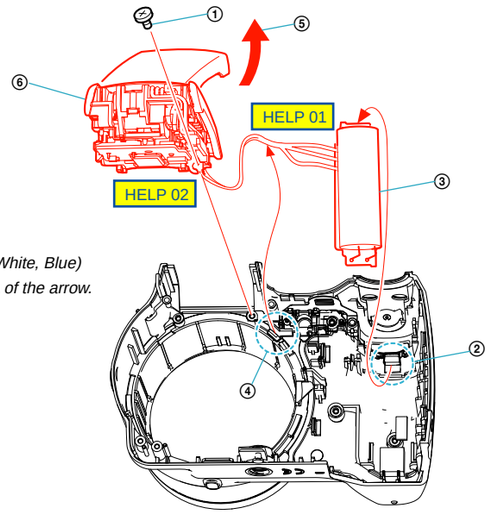




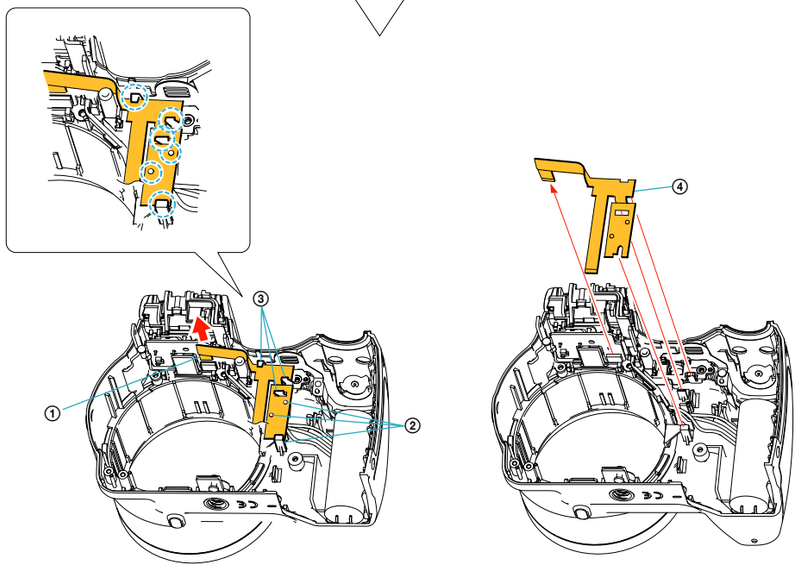
① Two tapping screws (M1.7x4) black
② Lens section



① Tapping screw (M1.7x4) black
② Control switch block (SW51780), Microphone unit

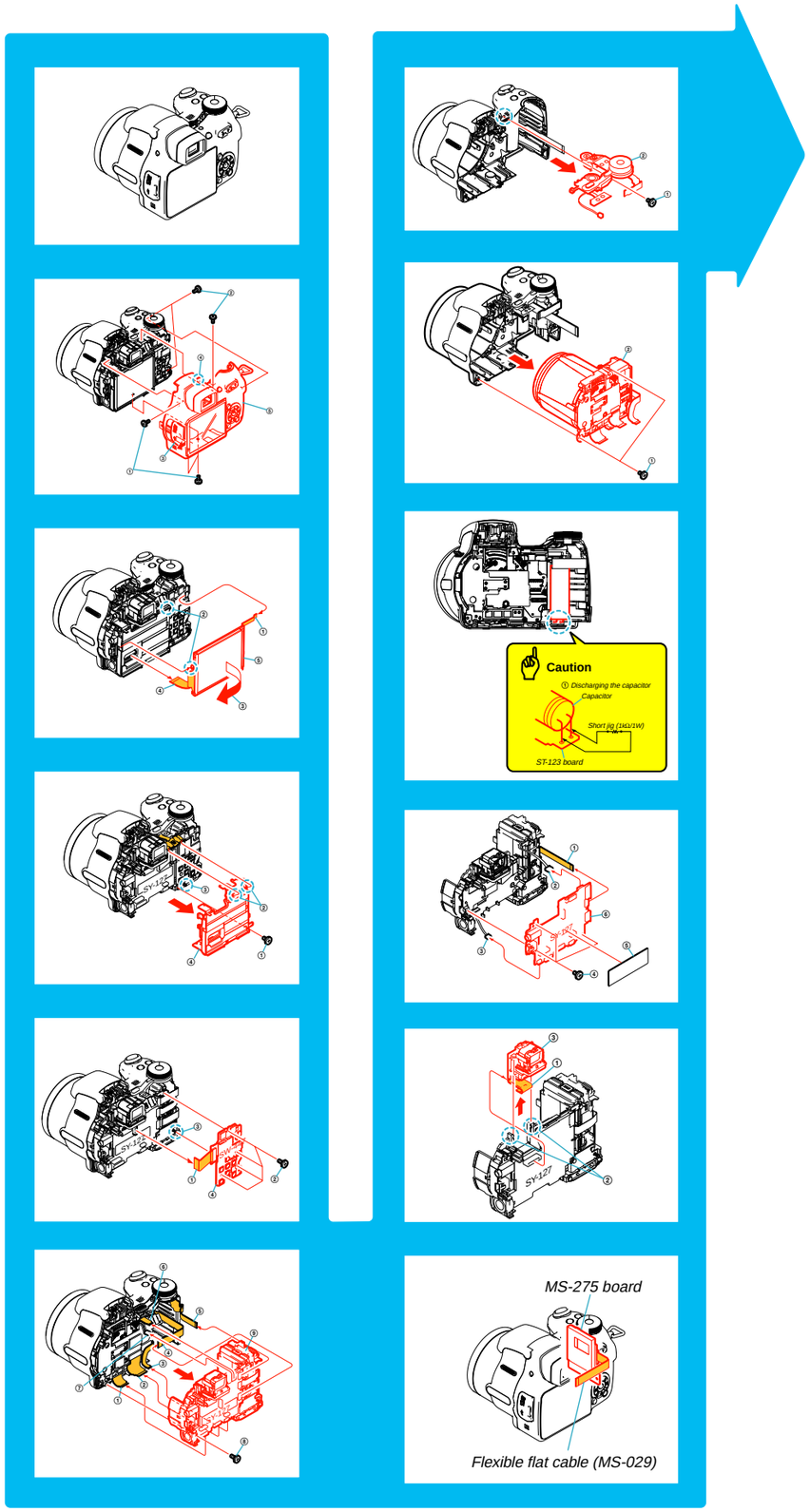


① Tapping screw (M1.7x4) black
② Claw
③ ST-123 board
④ Three harnesses (HA-001) (Red, White, Blue)
⑤ Open the ST cover in the direction of the arrow.
⑥ ST section

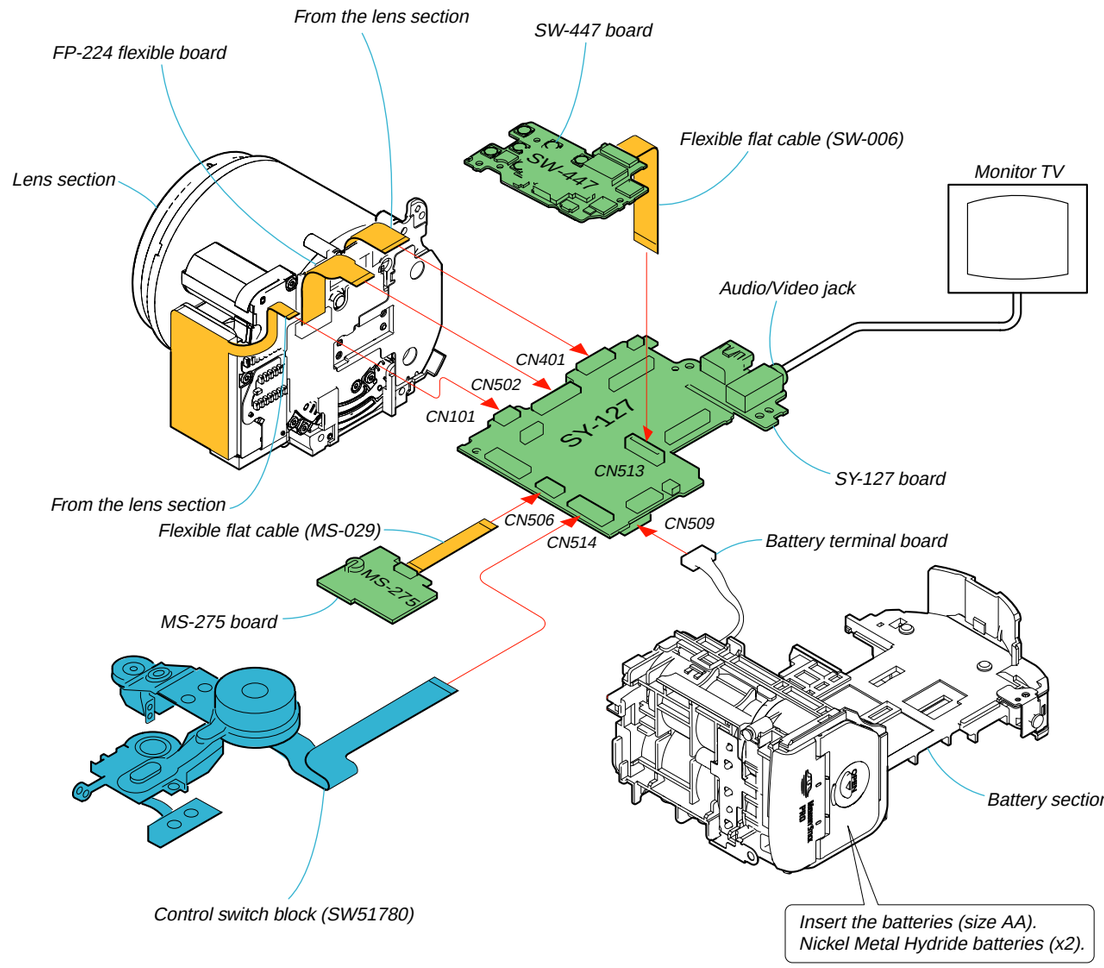


① Remove the AF-102 flexible board in the direction of the arrow.
② Three claws
③ Three claws
④ AF-102 flexible board

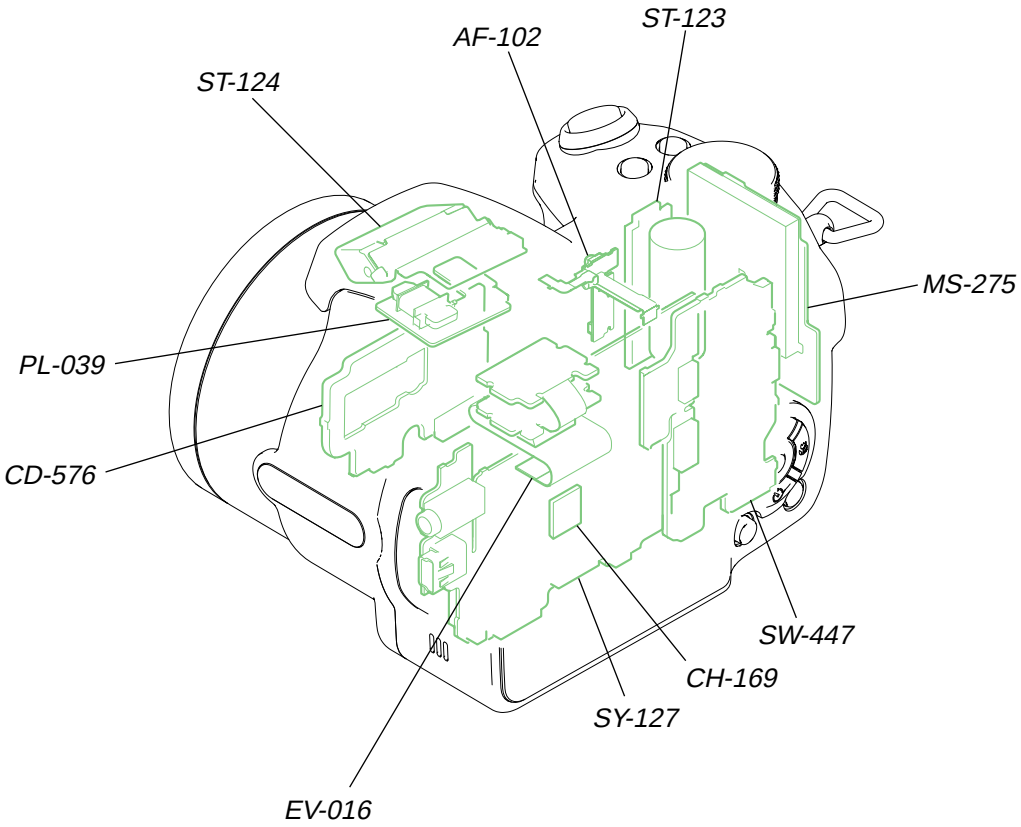
2-2. SERVICE POSITION



[SERVICE POSITION TO CHECK THE SY-127 BOARD]



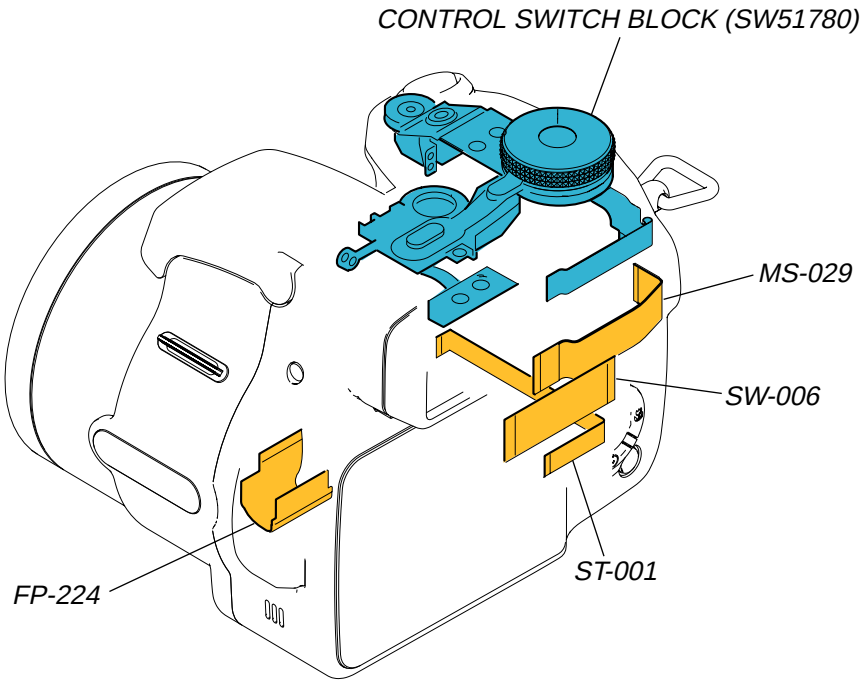
2-3. CIRCUIT BOARDS LOCATION



NAME	FUNCTION
AF-102	AF LED, LENS COVER SW
CD-576	CCD IMAGER
CH-169	CCD SIGNAL PROCESS
EV-016	EVF, BACK LIGHT
MS-275	MEMORY STICK, LI BATTERY
PL-039	PLUNGER
ST-123	FLASH DRIVE
ST-124	FLASH
SW-447	FUNCTION SW, PITCH/YAW SENSOR AMP
SY-127	LENS DRIVE, CAMERA A/D CONV., TIMING GENERATOR, CAMERA DSP, SYSTEM CONTROL, 256Mbit SDRAM, FLASH MEMORY, SUPER AND FLASH MEMORY, A/V AMP, USB/AV JACK, SP, MIC, PANEL DRIVE, STEADY SHOT CONTROL, LENS SERVO, CONNECTOR, DC/DC CONVERTER

2-4. FLEXIBLE BOARDS LOCATION

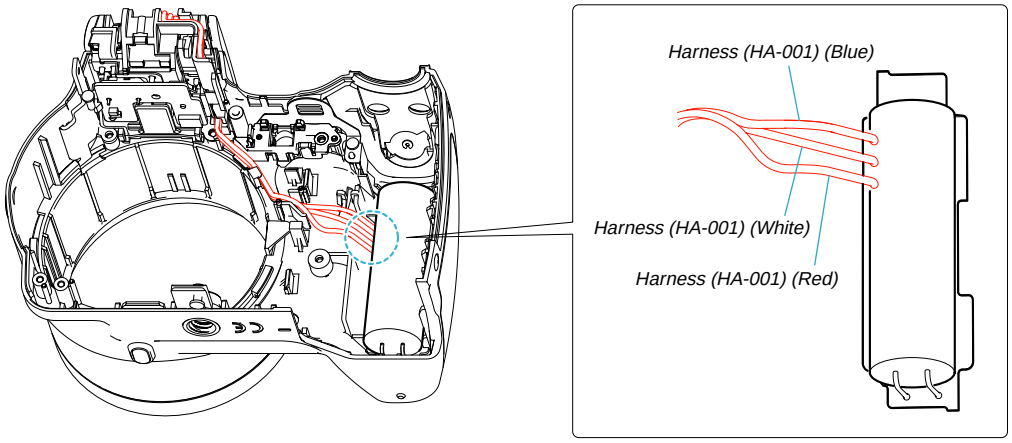
The flexible boards contained in the optical unit are not shown.



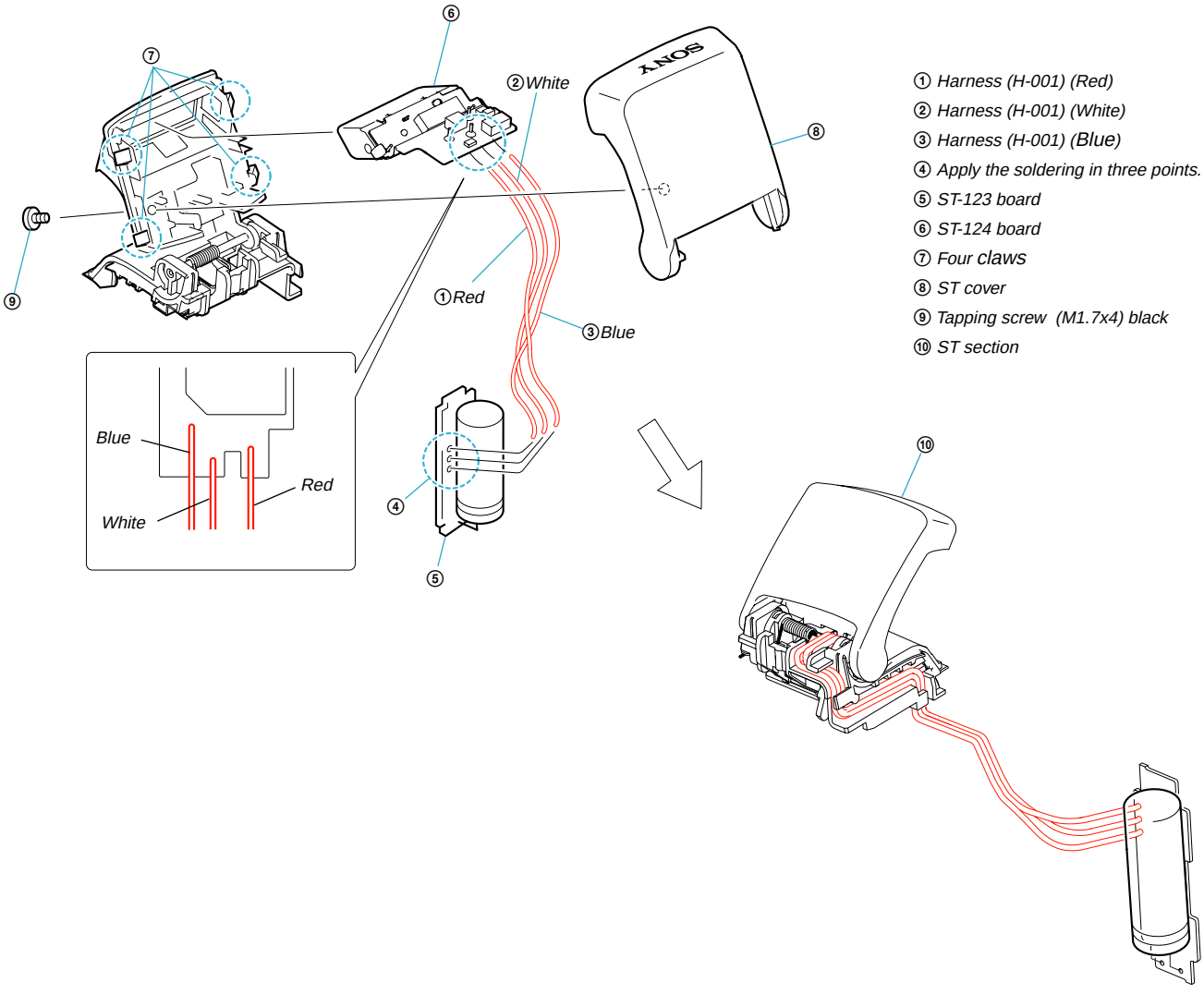
HELP

Disassembling and assembling procedures that require attention are described here.

HELP 01



HELP 02



① Harness (H-001) (Red)
② Harness (H-001) (White)
③ Harness (H-001) (Blue)
④ Apply the soldering in three points.
⑤ ST-123 board
⑥ ST-124 board
⑦ Four claws
⑧ ST cover
⑨ Tapping screw (M1.7x4) black
⑩ ST section

3. BLOCK DIAGRAMS

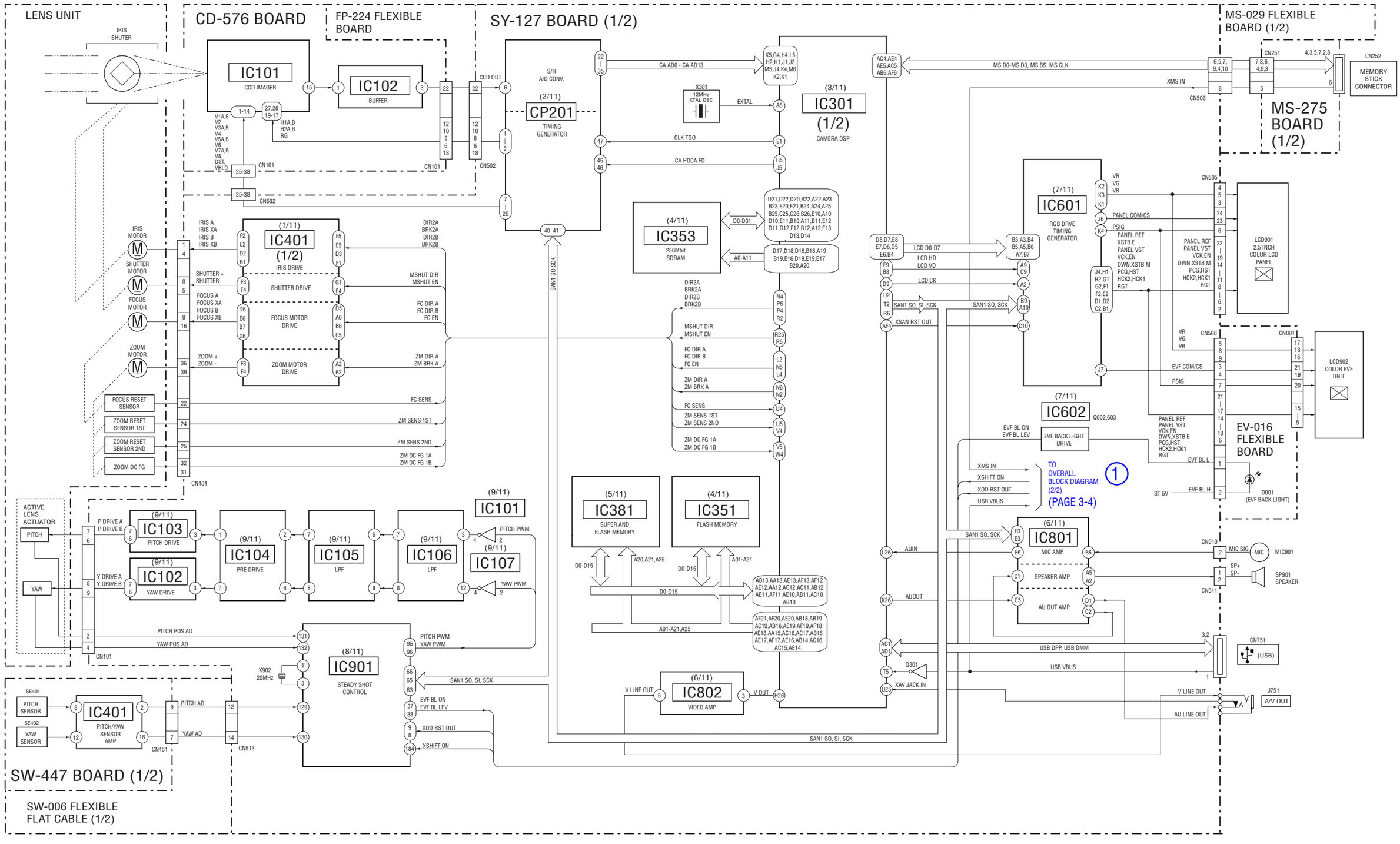
Link

- OVERALL BLOCK DIAGRAM (1/2)
- POWER BLOCK DIAGRAM (1/2)
- OVERALL BLOCK DIAGRAM (2/2)
- POWER BLOCK DIAGRAM (2/2)

3. BLOCK DIAGRAMS

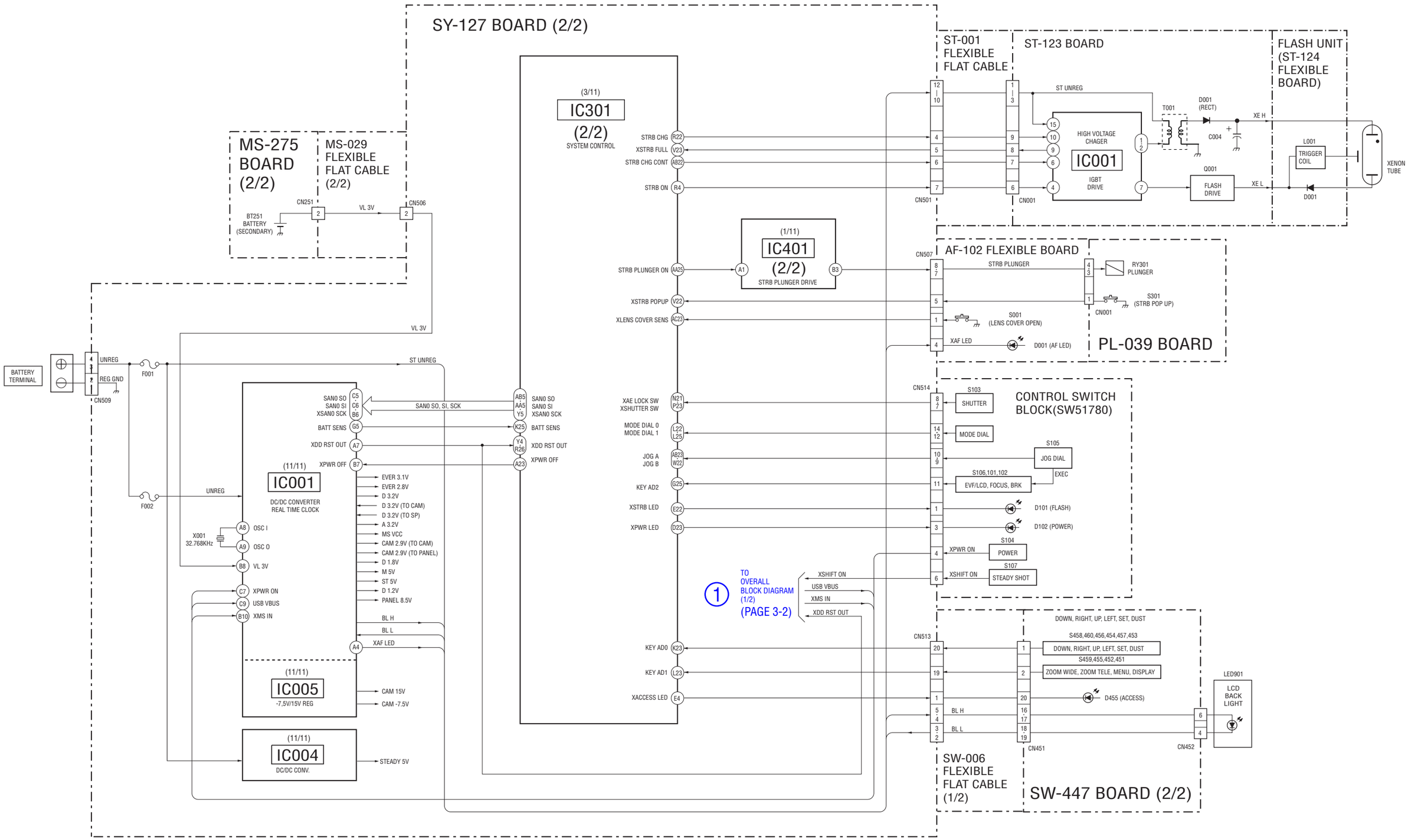
3-1. OVERALL BLOCK DIAGRAM (1/2)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



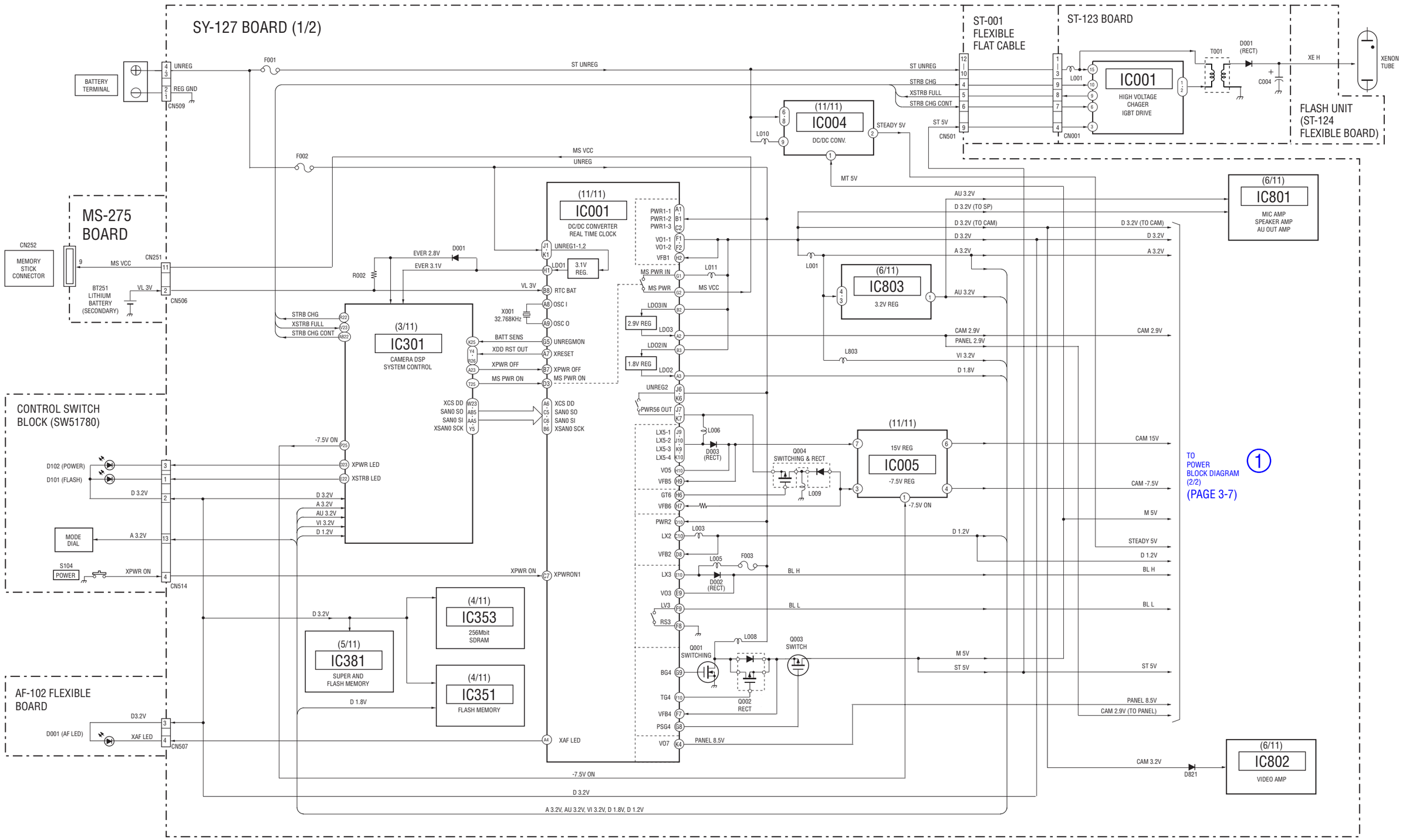
3-2. OVERALL BLOCK DIAGRAM (2/2)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



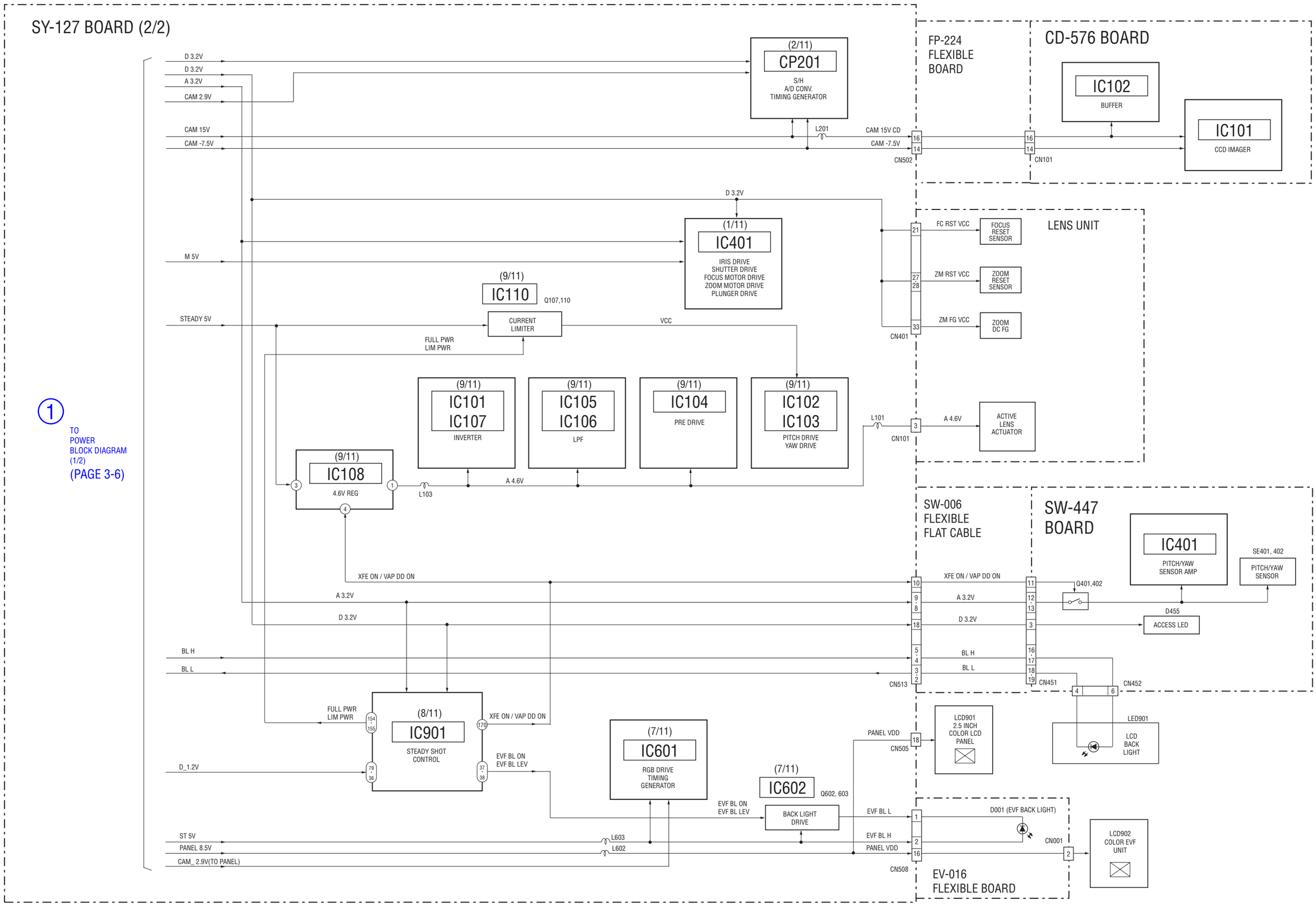
3-3. POWER BLOCK DIAGRAM (1/2)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.

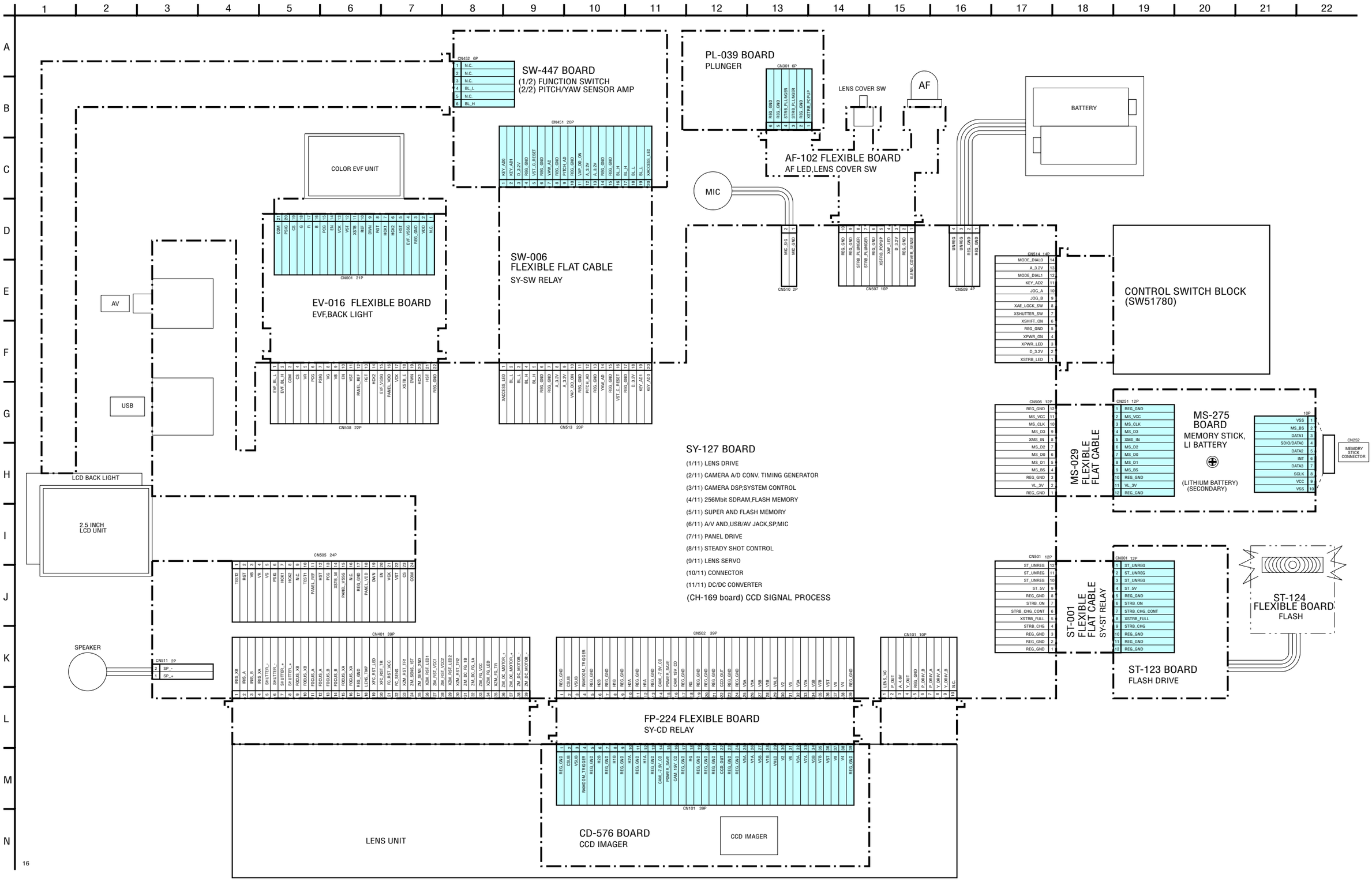


3-4. POWER BLOCK DIAGRAM (2/2)

( ) : Number in parenthesis ( ) indicates the division number of schematic diagram where the component is located.



4-1. FRAME SCHEMATIC DIAGRAM



4-2. SCHEMATIC DIAGRAMS

Link

CD-576 BOARD (CCD IMAGER)	EV-016 FLEXIBLE BOARD (EVF, BACK LIGHT)
MS-275 BOARD (MEMORY STICK, LI BATTERY)	AF-102 FLEXIBLE BOARD (AF LED, LENS COVER SW)
ST-123 BOARD (FLASH DRIVE)	SW-006 FLEXIBLE BOARD (SY-SW RELAY)
ST-124 FLEXIBLE BOARD (FLASH)	MS-029 FLEXIBLE BOARD (SY-MS RELAY)
PL-039 BOARD (PLUNGER)	ST-001 FLEXIBLE BOARD (SY-ST RELAY)
SW-447 BOARD (1/2) (FUNCTION SW)	FP-224 FLEXIBLE BOARD (SY-CD RELAY)
SW-447 BOARD (2/2) (PITCH/YAW SENSOR AMP)	CONTROL SWITCH BLOCK (SW51780)

COMMON NOTE FOR SCHEMATIC DIAGRAMS	WAVEFORMS

4-2. SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

(For schematic diagrams)

- All capacitors are in μF unless otherwise noted. pF : μμF. 50 V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. kΩ=1000 Ω, MΩ=1000 kΩ.
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.

Example

C541	L452
22U	10UH
TA A	2520

Kinds of capacitor
Temperature characteristics
External dimensions (mm)

- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
  In such cases, the unused circuits may be indicated.
- Parts with * differ according to the model/destination.
  Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- : non flammable resistor
- : fusible resistor
- : panel designation
- : B+ Line
- : B– Line
- : IN/OUT direction of (+,–) B LINE.
- : adjustment for repair.
- : VIDEO SIGNAL (ANALOG)
- : AUDIO SIGNAL (ANALOG)
- : VIDEO/AUDIO SIGNAL (ANALOG)
- : VIDEO/AUDIO/SERVO SIGNAL
- : SERVO SIGNAL
- Circled numbers refer to waveforms.

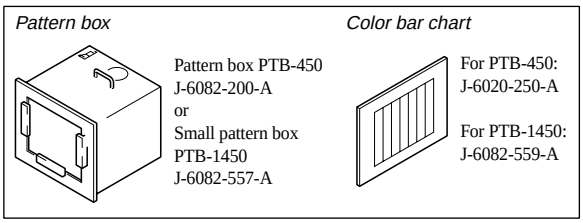
(Measuring conditions voltage and waveform)

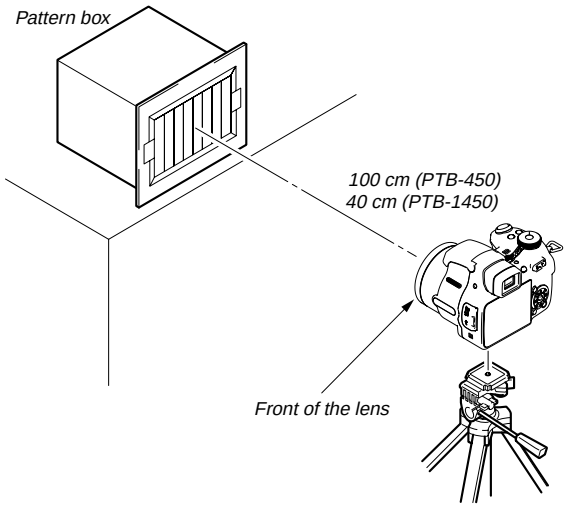
- Voltages and waveforms are measured between the measurement points and ground when camera shoots color bar chart of pattern box. They are reference values and reference waveforms.
  (VOM of DC 10 MΩ input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

Precautions Upon Replacing CCD imager

- The CD-576 board mounted as a repair part is not equipped with a CCD imager.
  When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
- As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
  In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

1. Connection





2. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.

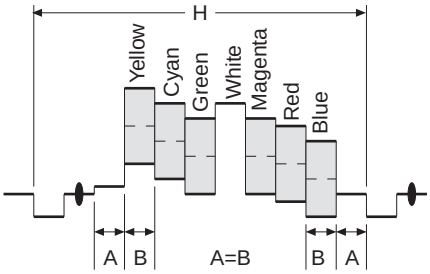


Fig. a (Video output terminal output waveform)

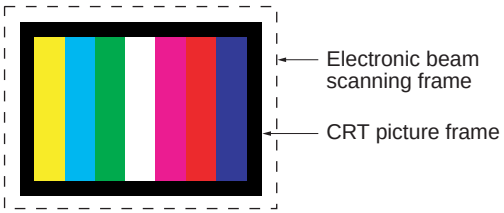


Fig.b (Picture on monitor TV)

When indicating parts by reference number, please include the board name.

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

For Schematic Diagram
• Refer to page 4-49 for printed wiring board.
• Refer to page 4-61 for waveforms

CD-576 BOARD
CCD IMAGER

XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R :REC MODE
P :PB MODE

CN101 39P

REG_GND	39	
V4	38	V4
V8	37	V8
VST	36	VST
V7B	35	V7B
V3B	34	V3B
V7A	33	V7A
V3A	32	V3A
V6	31	V6
V2	30	V2
VHLD	29	VHLD
V1B	28	V1B
V5B	27	V5B
V1A	26	V1A
V5A	25	V5A
REG_GND	24	
REG_GND	23	
CCD_OUT	22	
REG_GND	21	
REG_GND	20	
REG_GND	19	
RG	18	
REG_GND	17	
CAM_15V_CD	16	
POWER_SAVE	15	
CAM_-7.5V_CD	14	
REG_GND	13	
H1A	12	
REG_GND	11	
H2A	10	
REG_GND	9	
H1B	8	
REG_GND	7	
H2B	6	
REG_GND	5	
RAMDOM_TRIGGER	4	
VSUB	3	
CSUB	2	
REG_GND	1	

TO
FP-224
FLEXIBLE BOARD
(PAGE 4-16)

Note:IC101 is not included in this complete board of CD-576 board.

IC101
CCD IMAGER
Note

IC101
ICX495BQF

IC102
BUFFER

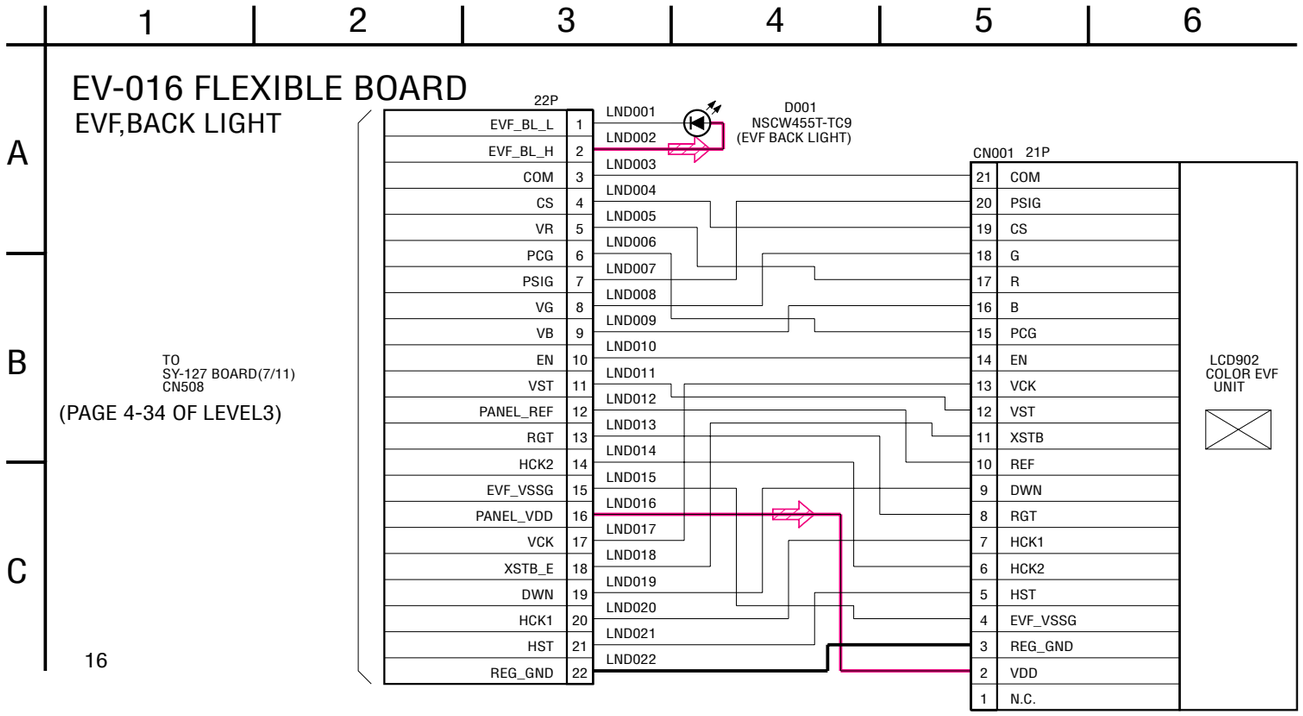
IC102
CXA3691EN-T9

Q102
DTC144EMT2L
SWITCH

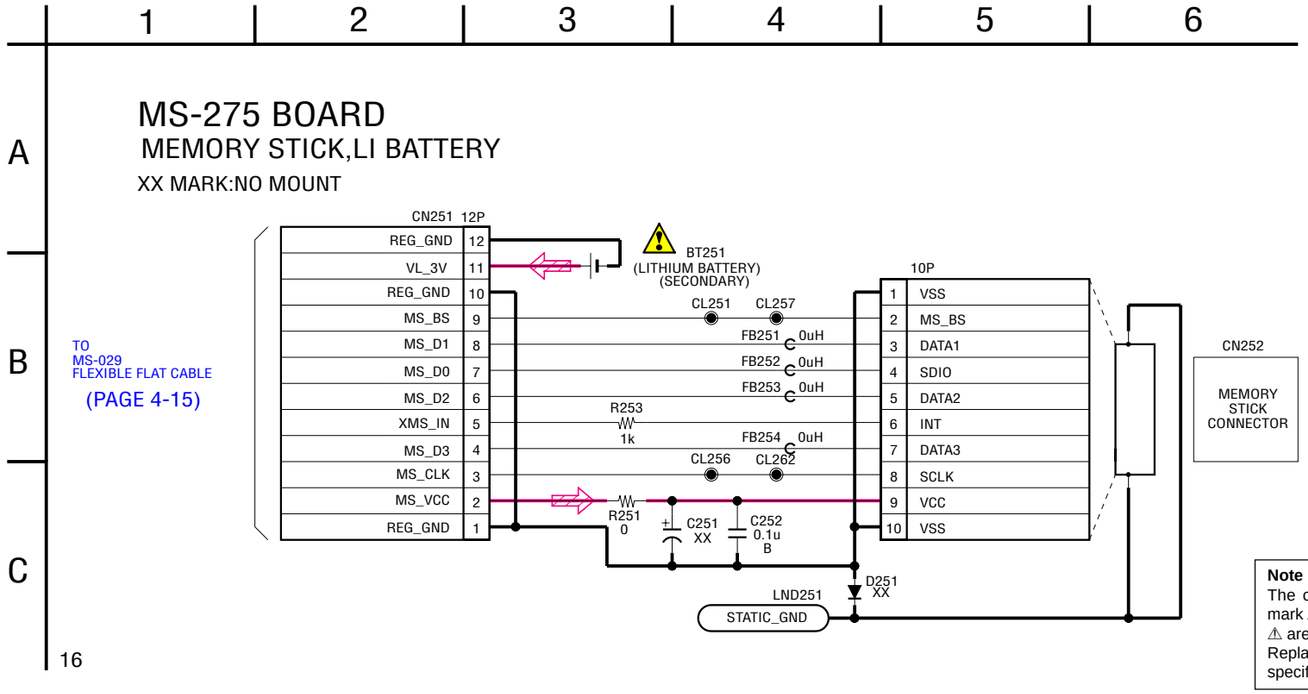
Q104
DTC144EMT2L
VSUB

C101 0.01u
C102 0.1u 16V B
C103 XX
C105 0.1u 16V B
C107 0.1u
C108 XX
C109 0.1u 16V B
R104 1500
R105 1200
R106 220k
R108 0
R109 270k
R110 1M

For Schematic Diagram
• Refer to page 4-49 for printed wiring board.



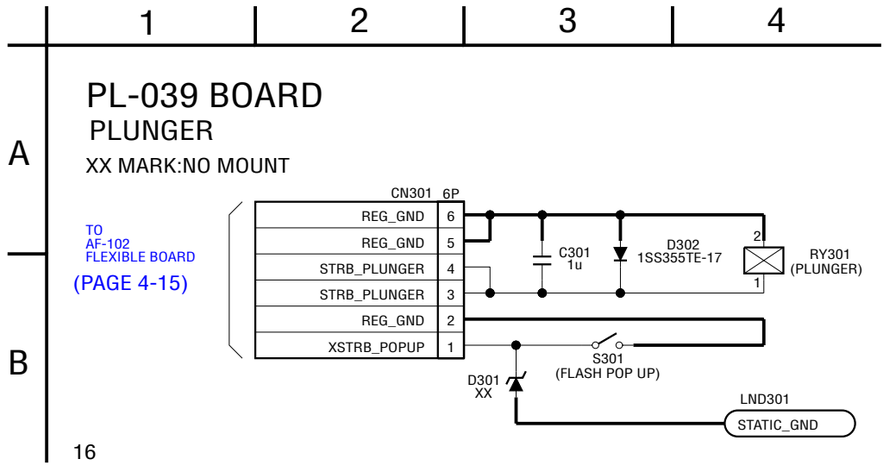
For Schematic Diagram
• Refer to page 4-47 for printed wiring board.



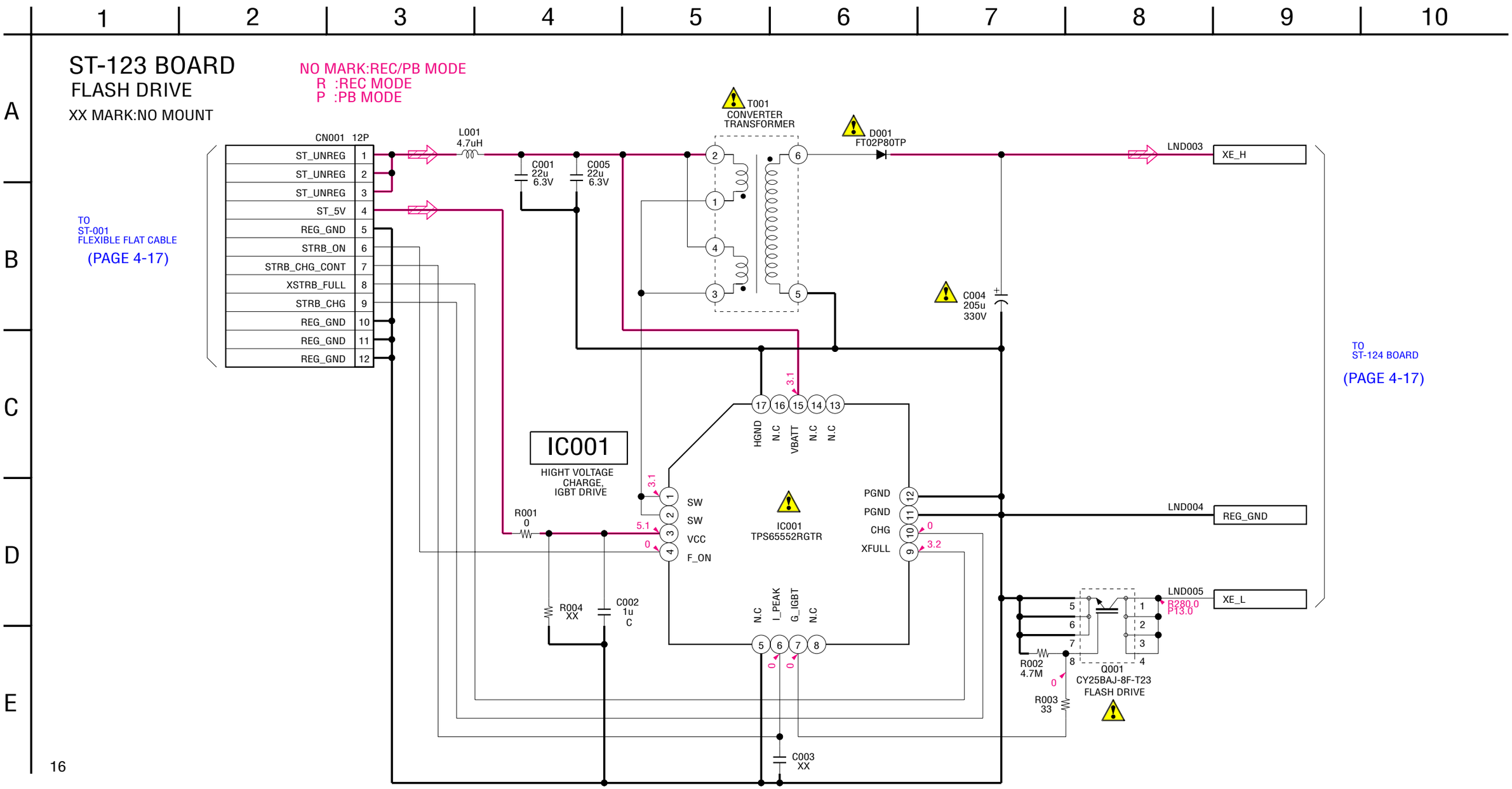
Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note :
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

For Schematic Diagram
• Refer to page 4-51 for printed wiring board.



For Schematic Diagram
• Refer to page 4-51 for printed wiring board.



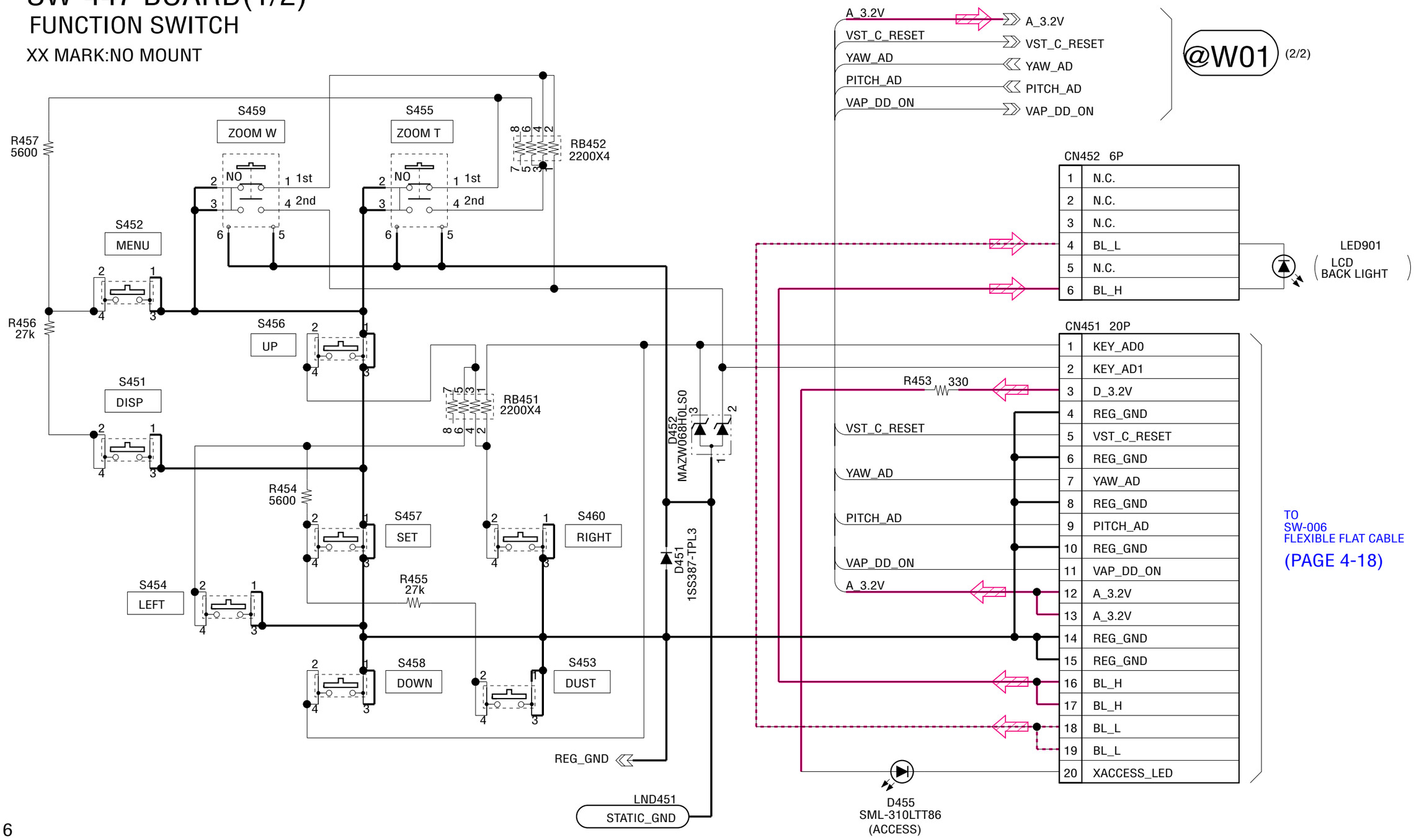
Note :	Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

For Schematic Diagram
• Refer to page 4-53 for printed wiring board.

SW-447 BOARD(1/2)

FUNCTION SWITCH

XX MARK:NO MOUNT



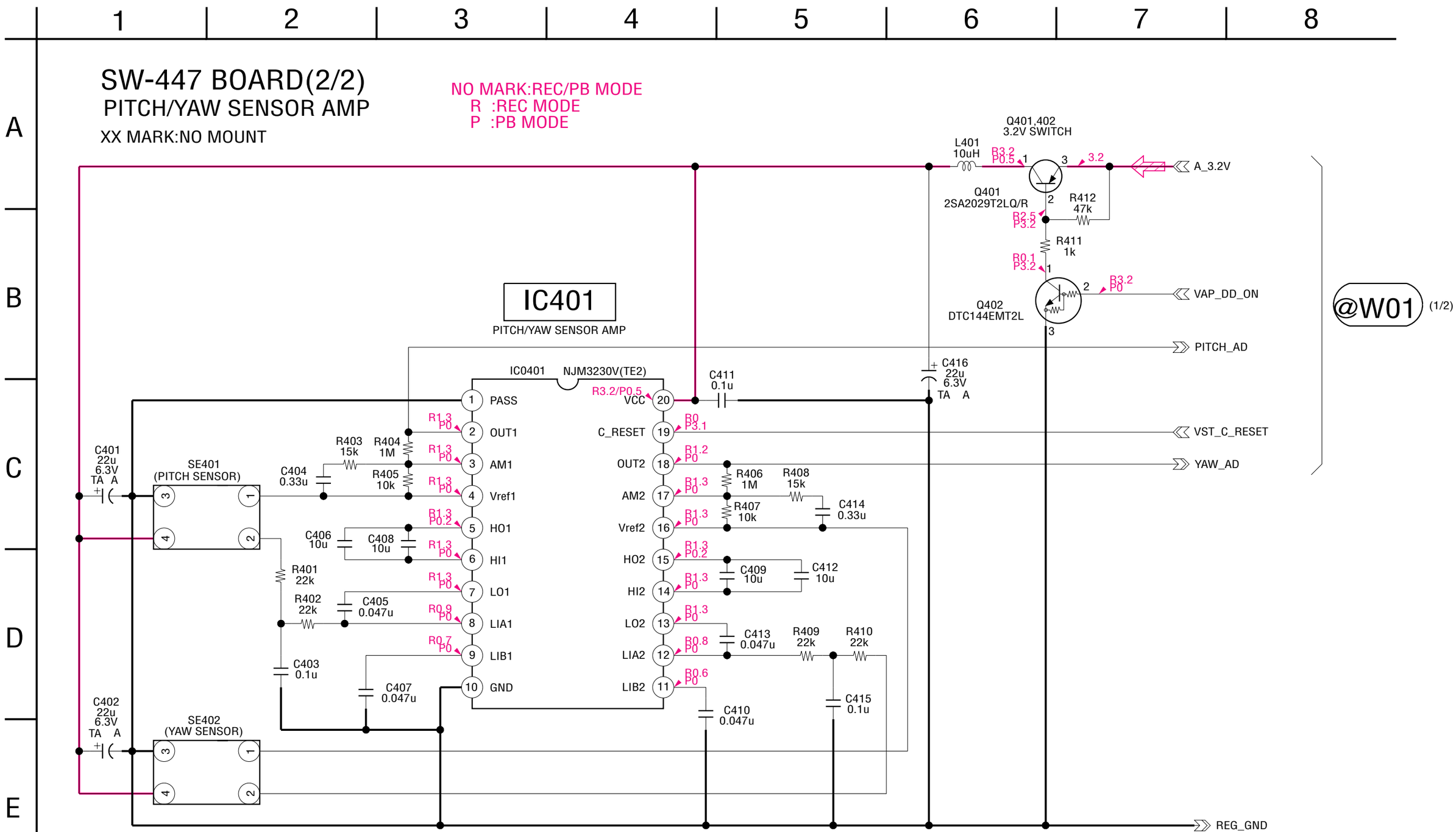
For Schematic Diagram
• Refer to page 4-53 for printed wiring board.

SW-447 BOARD(2/2)

PITCH/YAW SENSOR AMP

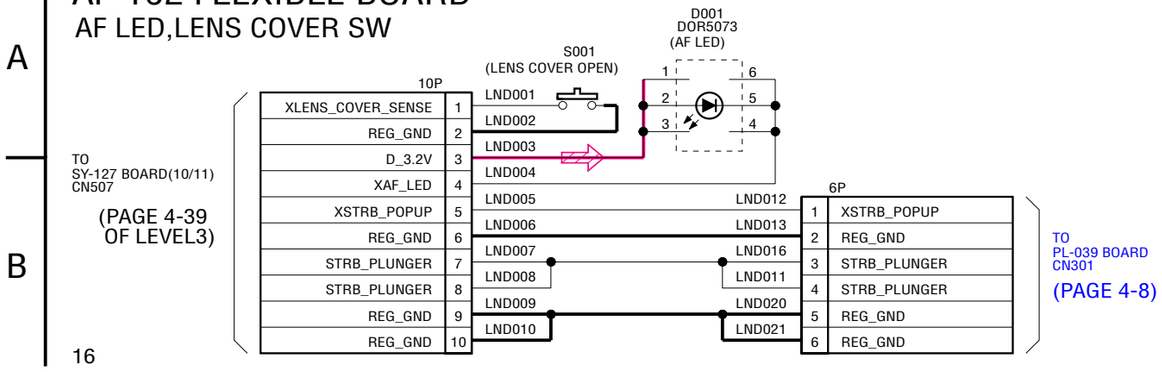
XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R :REC MODE
P :PB MODE

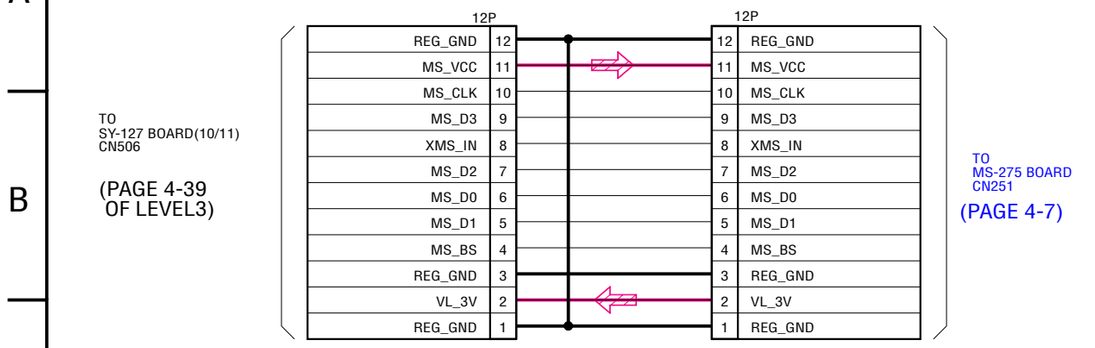


For Schematic Diagram
• Refer to page 4-47for printed wiring board.

AF-102 FLEXIBLE BOARD
AF LED,LENS COVER SW

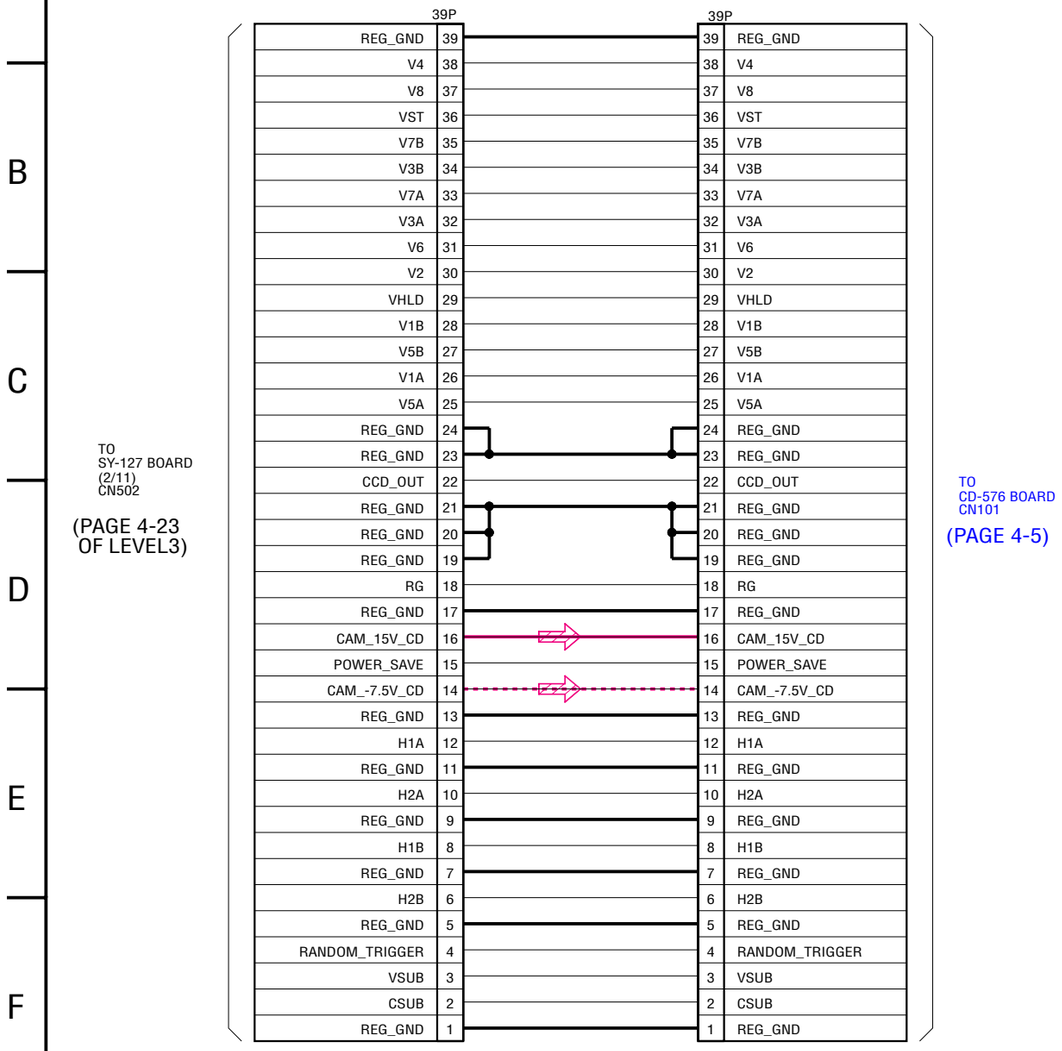


MS-029 FLEXIBLE FLAT CABLE
SY-MS RELAY



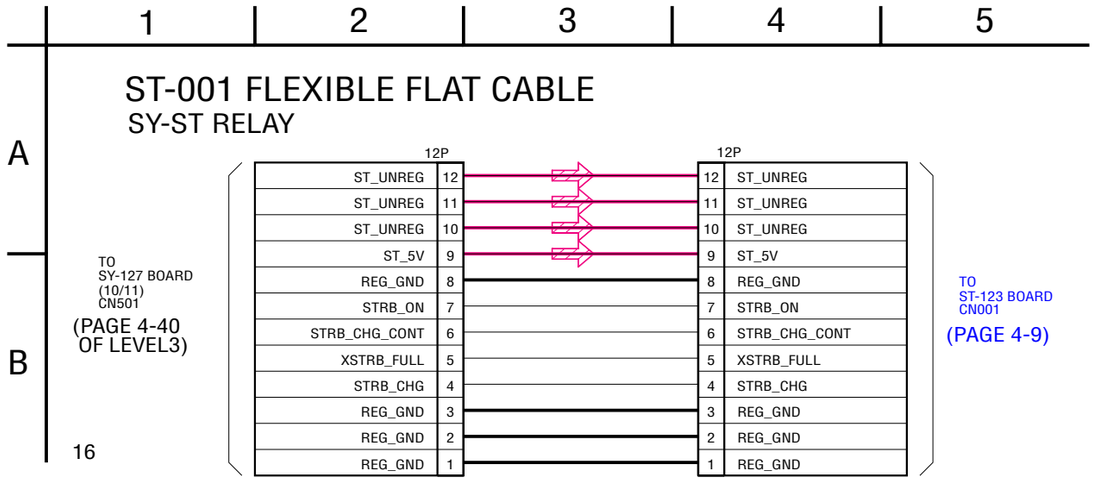
MS-029 FLEXIBLE FLAT CABLE is replaced as a block.
So that this PRINTED WIRING BOARD is omitted.

FP-224 FLEXIBLE BOARD
SY-CD RELAY



FP-224 FLEXIBLE BOARD is replaced as a block.
So that this PRINTED WIRING BOARD is omitted.

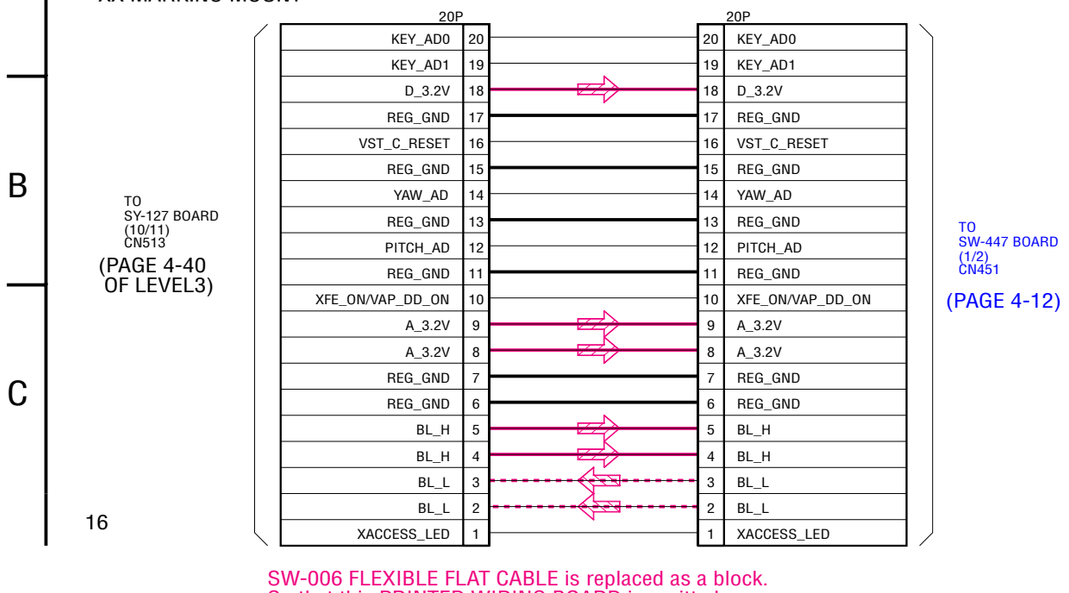
ST-001 FLEXIBLE FLAT CABLE
SY-ST RELAY



ST-001 FLEXIBLE FLAT CABLE is replaced as a block.
So that this PRINTED WIRING BOARD is omitted.

SW-006 FLEXIBLE FLAT CABLE
SY-SW RELAY

XX MARK:NO MOUNT



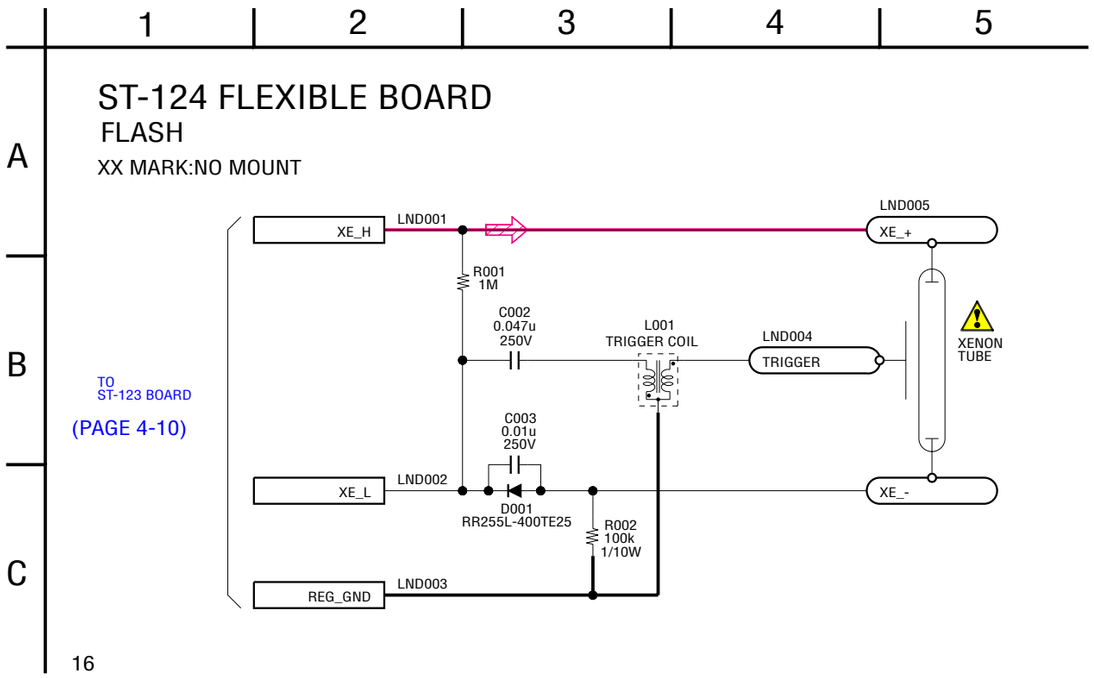
SW-006 FLEXIBLE FLAT CABLE is replaced as a block.
So that this PRINTED WIRING BOARD is omitted.

For Schematic Diagram

• Refer to page 4-52 for printed wiring board.

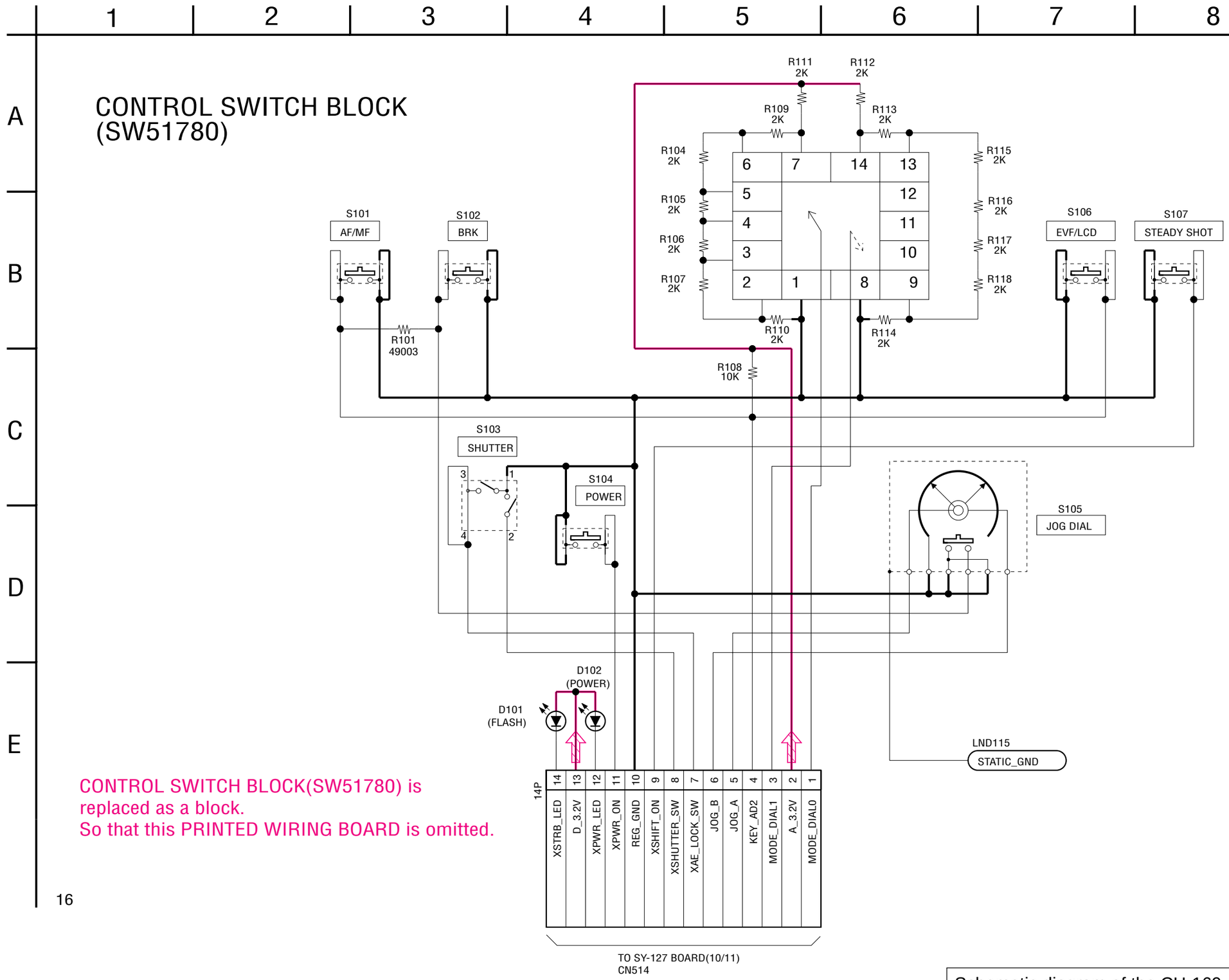
ST-124 FLEXIBLE BOARD
FLASH

XX MARK:NO MOUNT



Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

CONTROL SWITCH BLOCK (SW51780)



CONTROL SWITCH BLOCK(SW51780) is replaced as a block.
So that this PRINTED WIRING BOARD is omitted.

(PAGE 4-41 OF LEVEL3)

Schematic diagram of the CH-169 and SY-127 board are not shown.
Pages from 4-21 to 4-44 are not shown.

4-3. PRINTED WIRING BOARDS

Link

- CD-576 BOARD
- PL-039 BOARD
- MS-275 BOARD
- SW-447 BOARD
- ST-123 BOARD
- EV-016 FLEXIBLE BOARD
- ST-124 FLEXIBLE BOARD
- AF-102 FLEXIBLE BOARD
- COMMON NOTE FOR PRINTED WIRING BOARDS
- WAVEFORMS
- MOUNTED PARTS LOCATION
- CIRCUIT BOARDS LOCATION
- FLEXIBLE BOARDS LOCATION

NAME	FUNCTION
AF-102	AF LED, LENS COVER SW
CD-576	CCD IMAGER
CH-169	CCD SIGNAL PROCESS
EV-016	EVF, BACK LIGHT
MS-275	MEMORY STICK, LI BATTERY
PL-039	PLUNGER
ST-123	FLASH DRIVE
ST-124	FLASH
SW-447	FUNCTION SW, PITCH/YAW SENSOR AMP
SY-127	LENS DRIVE, CAMERA A/D CONV., TIMING GENERATOR, CAMERA DSP, SYSTEM CONTROL, 256Mbit SDRAM, FLASH MEMORY, SUPER AND FLASH MEMORY, A/V AMP, USB/AV JACK, SP, MIC, PANEL DRIVE, STEADY SHOT CONTROL, LENS SERVO, CONNECTOR, DC/DC CONVERTER

4-3. PRINTED WIRING BOARDS

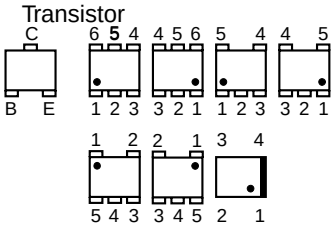
THIS NOTE IS COMMON FOR WIRING BOARDS
(In addition to this, the necessary note is printed in each block)

(For printed wiring boards)

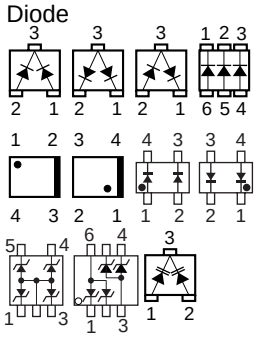
- : Uses unleaded solder.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are a few cases that the part printed on diagram isn't mounted in this model.
- : panel designation

- Chip parts.

Transistor



Diode



BOARD INFORMATION

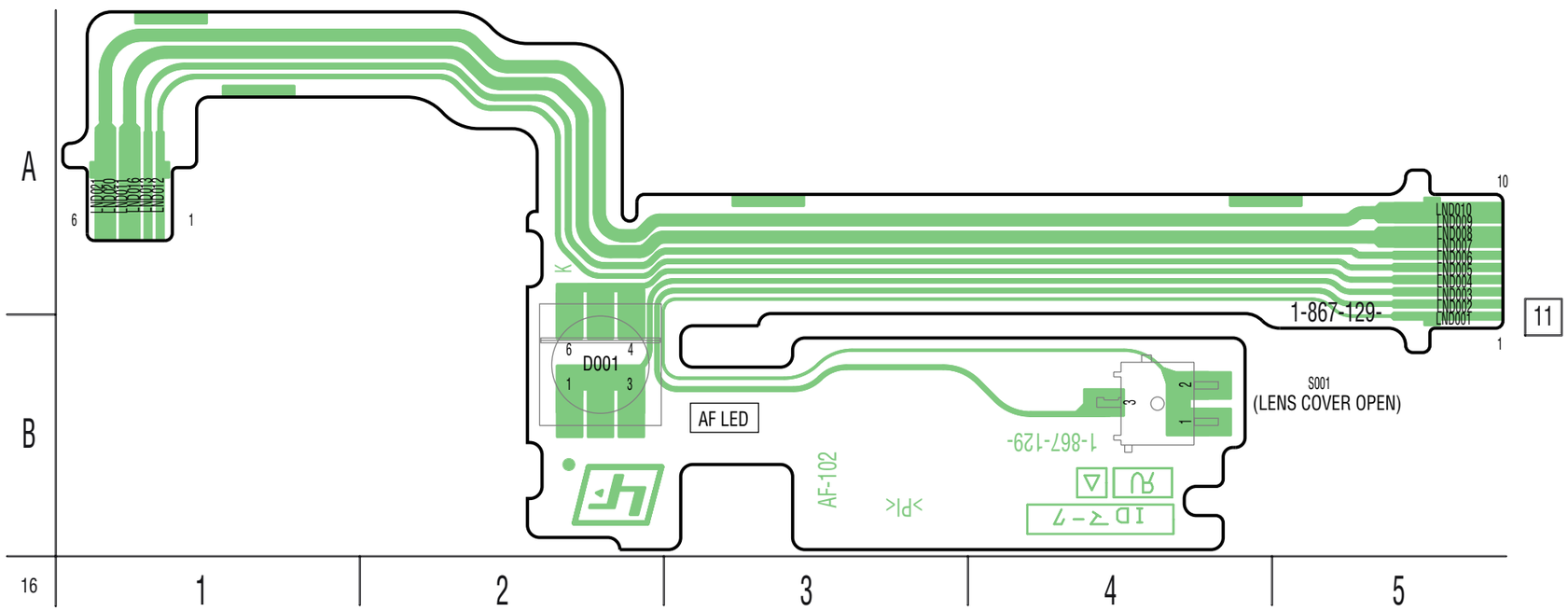
board name	waveforms (shown on page)	parts location (shown on page)	pattern	
			number of layers	layers not shown
CD-576	4-61	4-63	2	–
MS-275	–	–	2	–
ST-123	–	–	2	–
ST-124	–	–	1	–
PL-039	–	–	2	–
SW-447	–	4-63	2	–
EV-016	–	–	1	–
AF-102	–	–	1	–
SY-127	4-62	4-64	8	2 to 7

4-3. PRINTED WIRING BOARDS

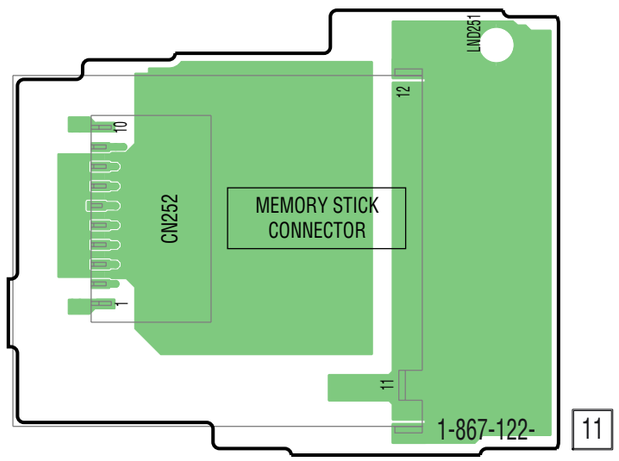
• Refer to page 4-45 for common note for printed wiring board.

• : Uses unleaded solder.

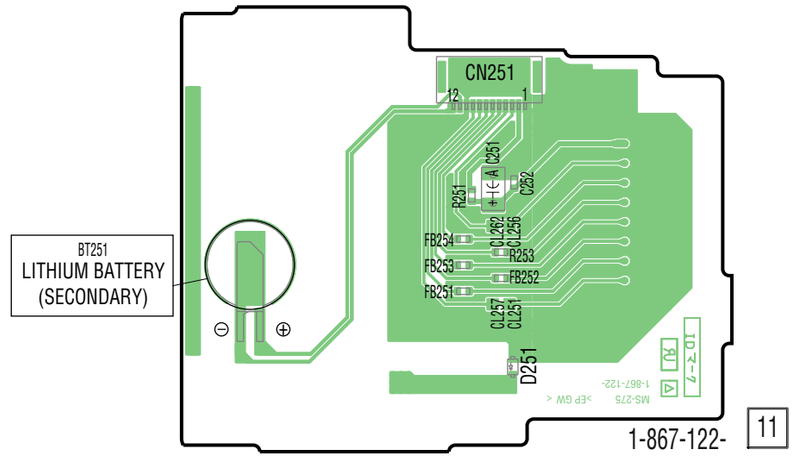
AF-102 FLEXIBLE BOARD



MS-275 BOARD(SIDE A)



MS-275 BOARD(SIDE B)



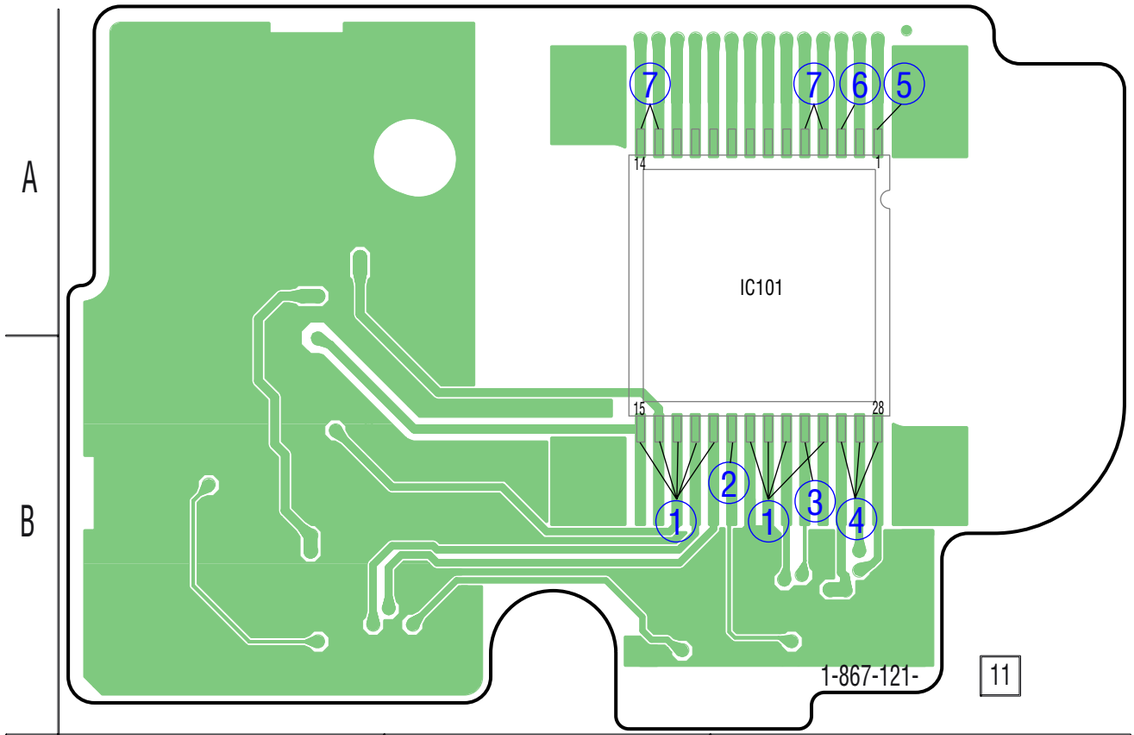
CAUTION :
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

• Refer to page 4-45 for common note for printed wiring board.

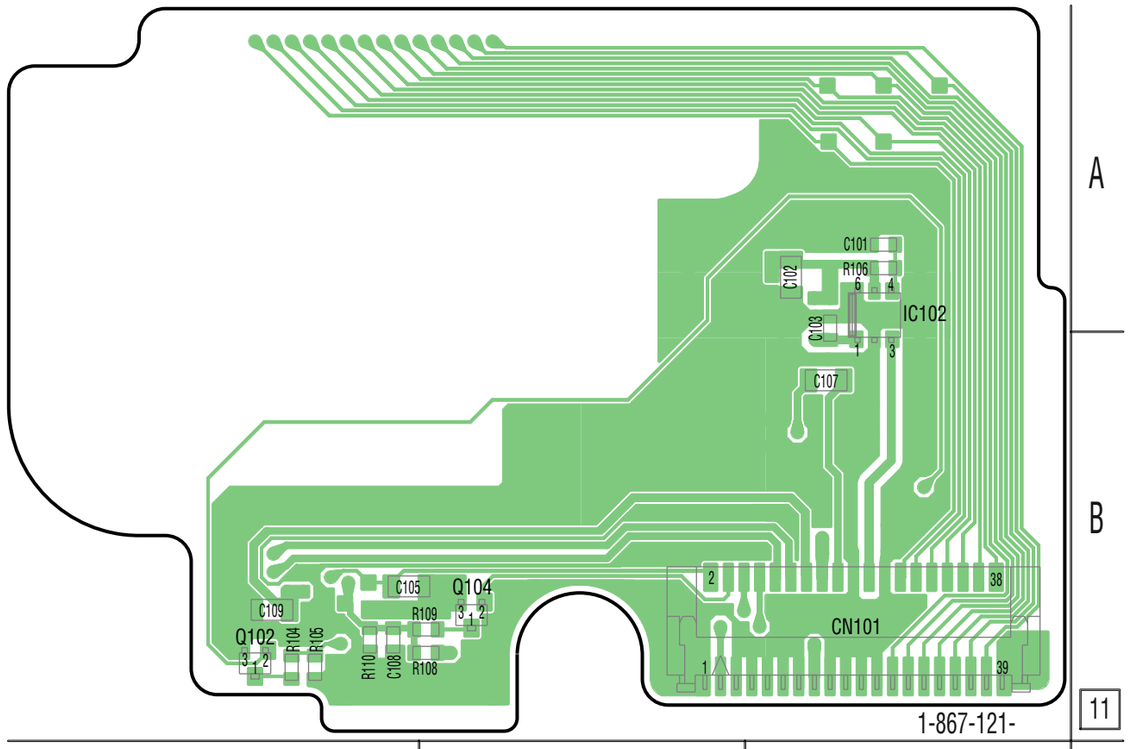
• : Uses unleaded solder.

CD-576 BOARD(SIDE A)

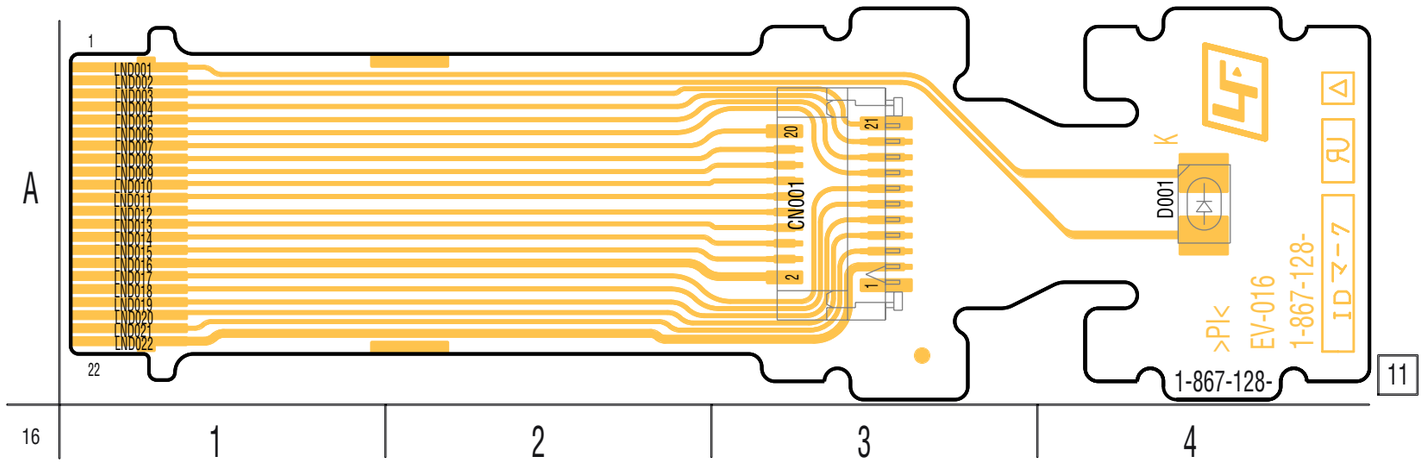
Note:IC101 is not included in
this COMPLETE of CD-576 board



CD-576 BOARD(SIDE B)



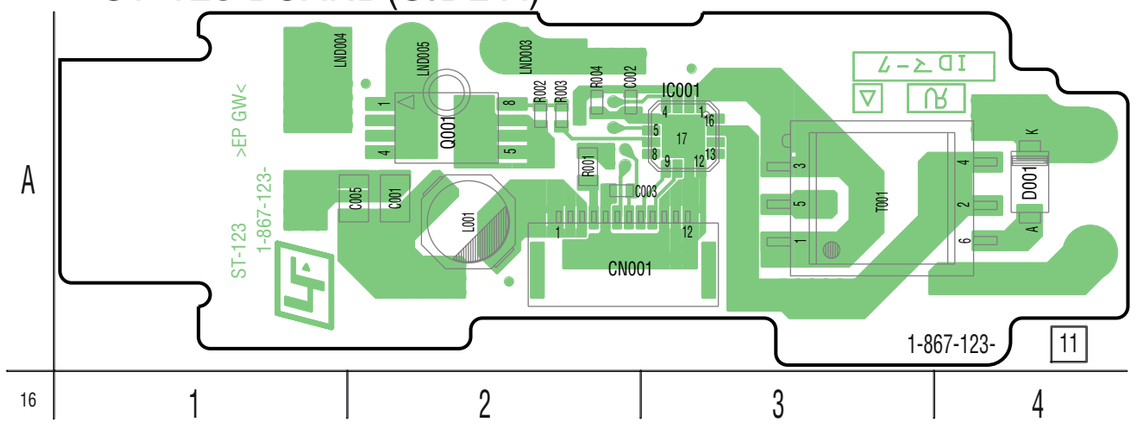
EV-016 FLEXIBLE BOARD



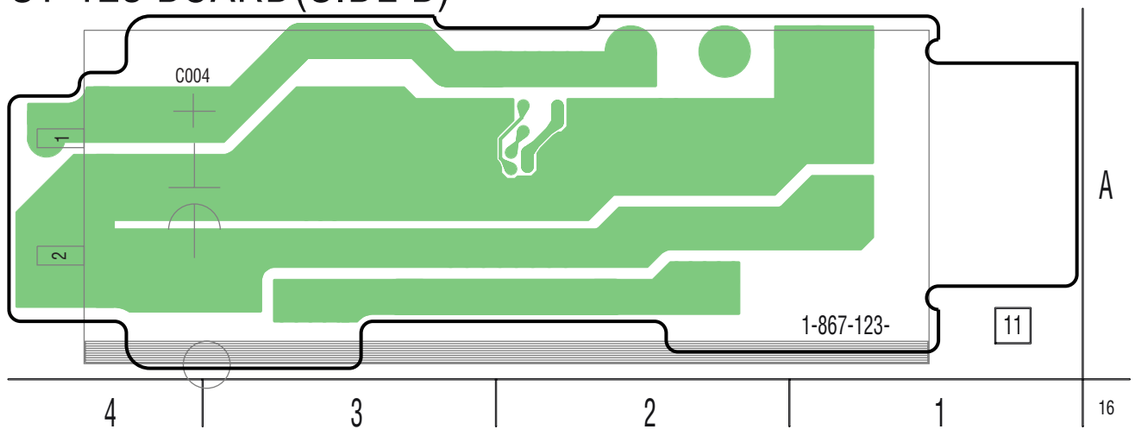
• Refer to page 4-45 for common note for printed wiring board.

• : Uses unleaded solder.

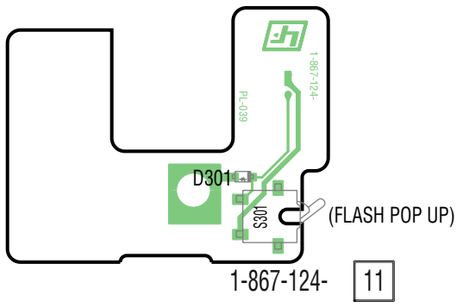
ST-123 BOARD(SIDE A)



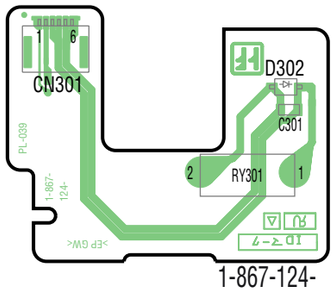
ST-123 BOARD(SIDE B)



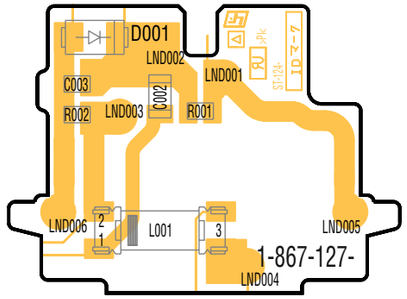
PL-039 BOARD (SIDE A)



PL-039 BOARD (SIDE B)



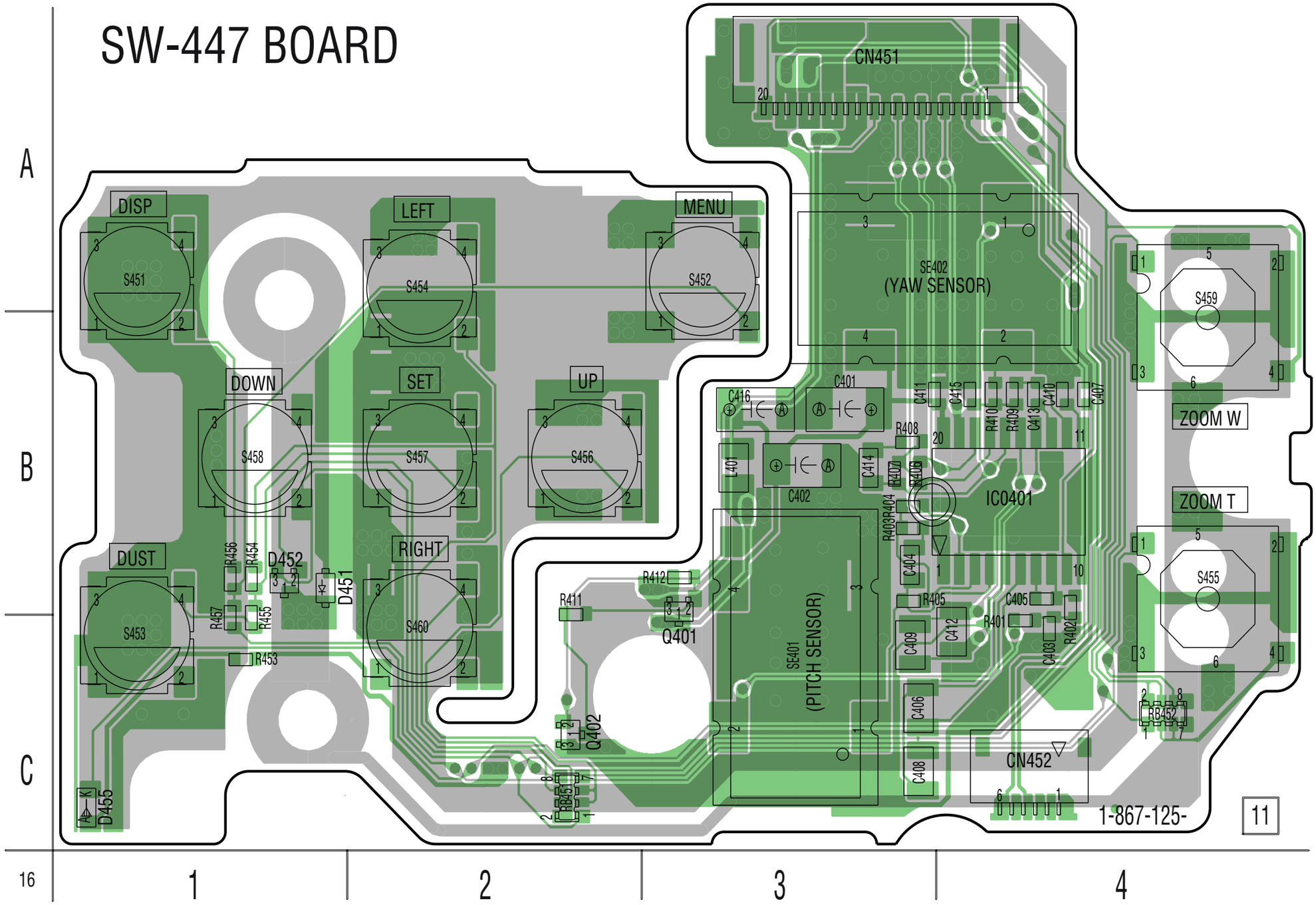
ST-124 FLEXIBLE BOARD



• Refer to page 4-45 for common note for printed wiring board.

• : Uses unleaded solder.

SW-447 BOARD

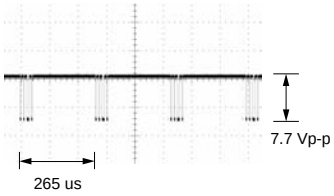


Printed wiring board of the CH-169 and SY-127 board are not shown.
Pages from 4-55 to 4-60 are not shown.

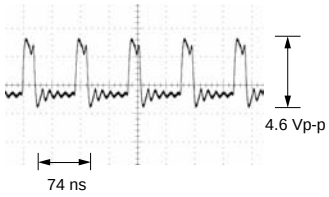
4-4. WAVEFORMS

CD-576 BOARD (CAMERA MODE)

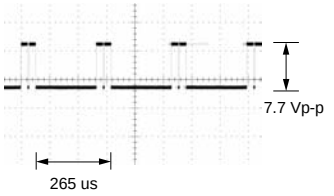
① IC101 ①-⑤,⑦-⑨,⑪



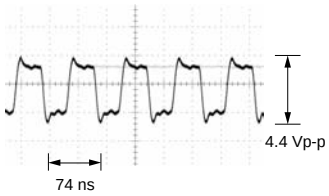
⑥ IC101 ⑰



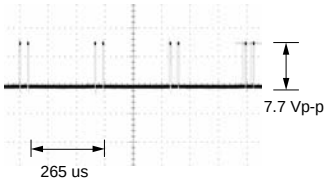
② IC101 ⑥



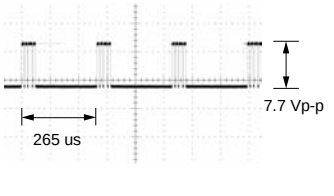
⑦ IC101 ⑱,⑲,㉗,㉘



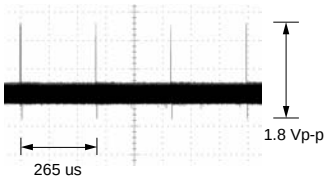
③ IC101 ⑩



④ IC101 ⑫-⑭



⑤ IC101 ⑮



Waveforms of the SY-127 board are not shown.
Page 4-62 is not shown.

4-5. MOUNTED PARTS LOCATION

no mark : side A
* mark : side B

CD-576 BOARD

* C101	A-1
* C102	A-1
* C103	A-1
* C105	B-3
* C107	B-1
* C108	B-3
* C109	B-3
* CN101	B-1
IC101	A-3
* IC102	A-1
* Q102	B-3
* Q104	B-2
* R104	B-3
* R105	B-3
* R106	A-1
* R108	B-2
* R109	B-2
* R110	B-3

SW-447 BOARD

C401	B-3
C402	B-3
C403	C-4
C404	B-3
C405	B-4
C406	C-3
C407	B-4
C408	C-3
C409	C-3
C410	B-4
C411	B-3
C412	C-4
C413	B-4
C414	B-3
C415	B-4
C416	B-3
CN451	A-3
CN452	C-4
D451	B-1
D452	B-1
D455	C-1
IC0401	B-4
L401	B-3
Q401	C-3
Q402	C-2
R401	C-4
R402	C-4
R403	B-3
R404	B-3
R405	B-3
R406	B-3
R407	B-3
R408	B-3
R409	B-4
R410	B-4
R411	B-2
R412	B-3
R453	C-1
R454	B-1
R455	C-1
R456	B-1
R457	C-1
RB451	C-2
RB452	C-4
S451	A-1
S452	A-3
S453	C-1
S454	A-2
S455	B-4
S456	B-2
S457	B-2
S458	B-1
S459	A-4
S460	C-2
SE401	C-3
SE402	A-3

Mounted parts location of the SY-127 board are not shown.
Page 4-64 is not shown.

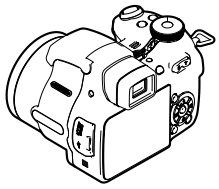
NOTE

5. REPAIR PARTS LIST

NOTE: Characters A to Z of the electrical parts list indicate location of exploded views in which the desired part is shown.

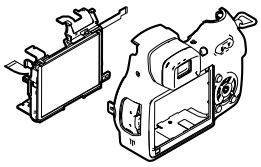
Link

EXPLODED VIEWS

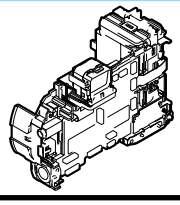


H

OVERALL SECTION

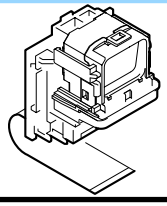


LCD/CABINET(REAR) SECTION



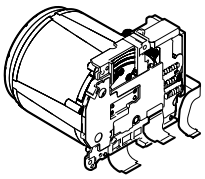
D
I

MAIN SECTION



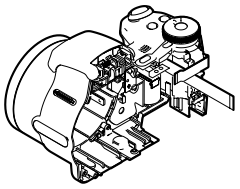
C

EVF SECTION



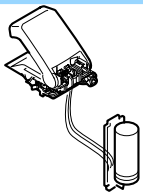
B

LENS SECTION



A

CABINET(FRONT) SECTION



E
F
G

ST SECTION

Link

ELECTRICAL PARTS LIST

ACCESSORIES

AF-102 Flexible BOARD A	CD-576 BOARD B	EV-016 Flexible BOARD C
MS-275 BOARD D	PL-039 BOARD E	ST-123 BOARD F
ST-124 Flexible BOARD G	SW-447 BOARD H	SY-127 BOARD I

5. REPAIR PARTS LIST

NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- Abbreviation
  CND : Canadian model
  HK : Hong Kong model
  AUS : Australian model
  CH : Chinese model
  KR : Korea model
  JE : Tourist model
  J : Japanese model

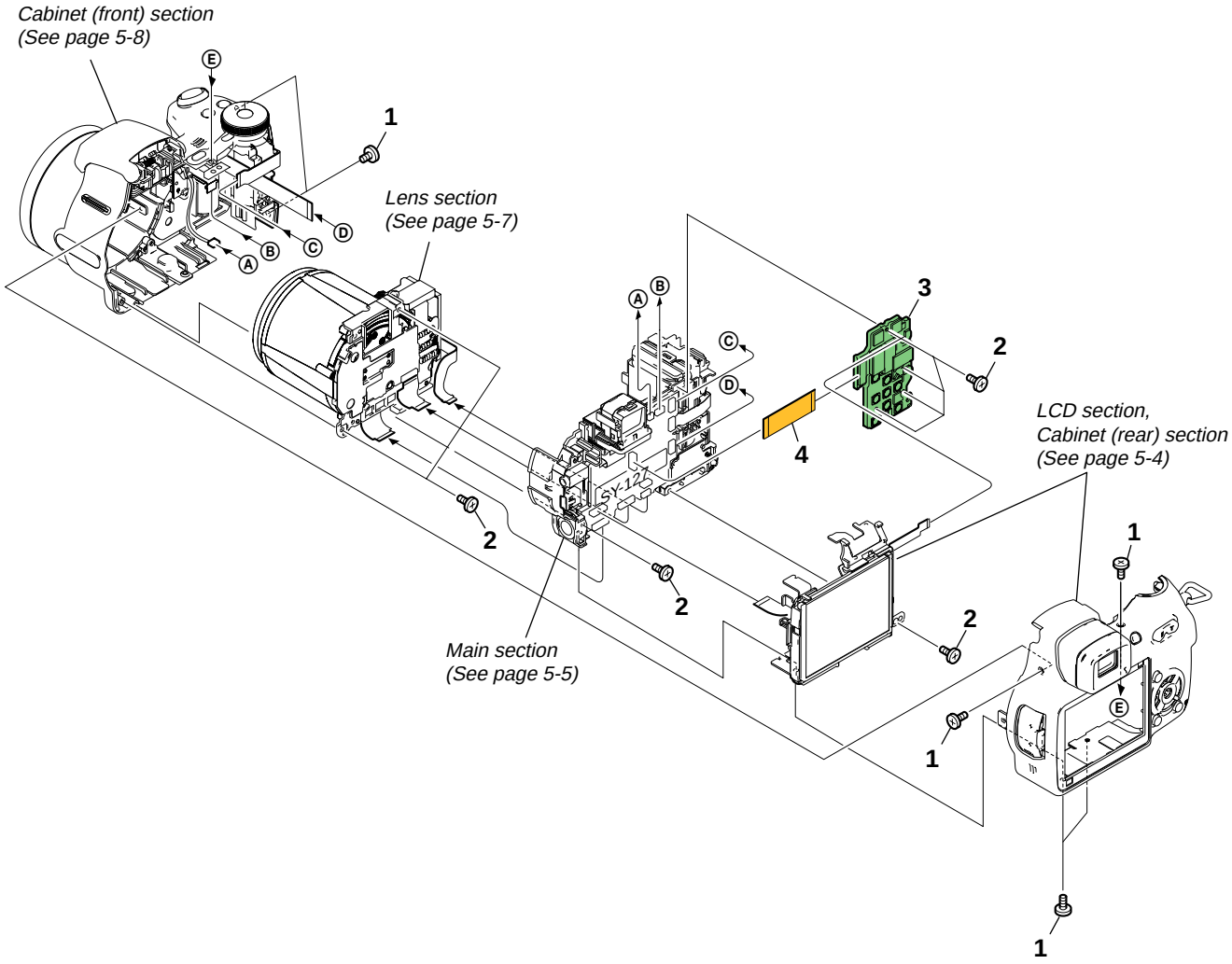
Language that can be selected about SY-127 board

	Area	Japanese	English	French	German	Spanish	Italian	Portugal	Simplified Chinese	Traditional Chinese	Arabic	Dutch	Russian	Swedish	Korean
GP1	J	●													
GP2	US CND AUS Vietnam		●	●		●	●		●	●					
GP3	AEP UK		●	●	●	●	●	●				●	●	●	
GP4	E AR BR TW		●			●		●	●	●	●				
GP5	JE HK CH KR		●			●		●	●	●					●

5. REPAIR PARTS LIST

5-1. EXPLODED VIEWS

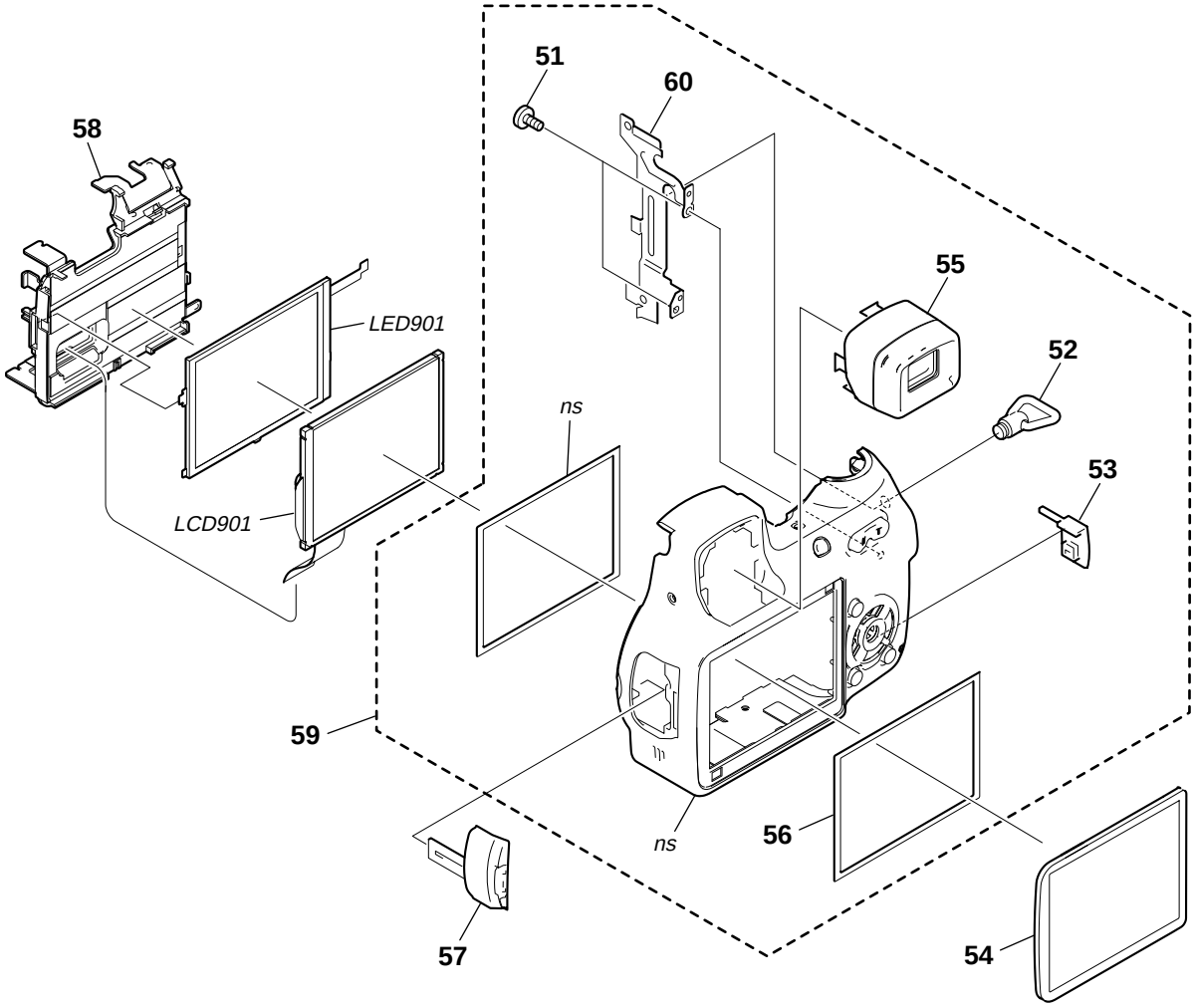
5-1-1. OVERALL SECTION



Ref. No.	Part No.	Description
1	3-056-233-21	SCREW (M2), LOCK ACE, P2
2	3-080-204-11	SCREW, TAPPING, P2
3	A-1119-330-A	SW-447 BOARD, COMPLETE
4	1-830-604-11	CABLE, FLEXIBLE FLAT (SW-006)

5-1-2. LCD SECTION, CABINET(REAR) SECTION

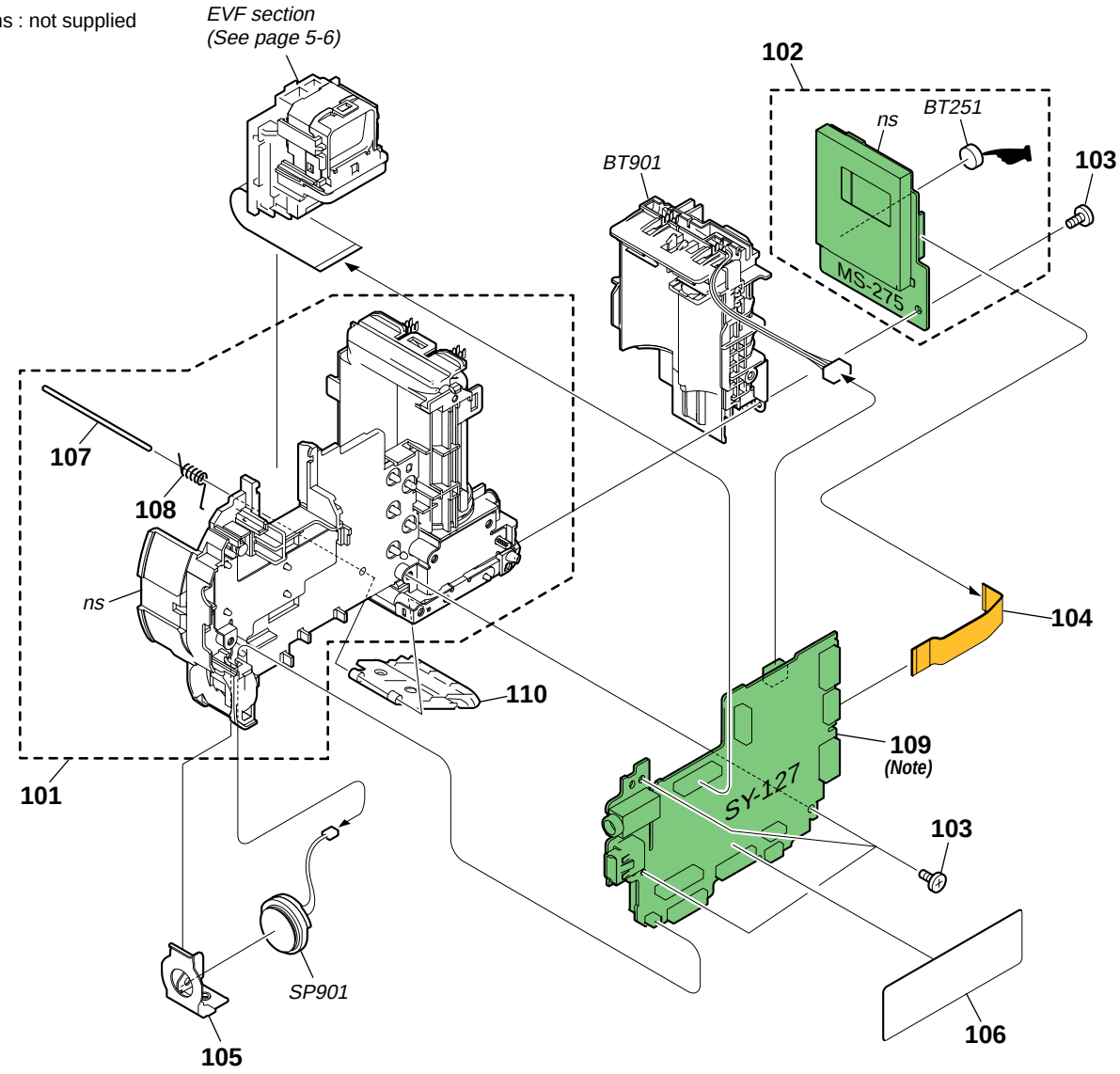
ns : not supplied



Ref. No.	Part No.	Description
51	3-080-204-11	SCREW, TAPPING, P2
52	2-629-828-01	SHEET METAL (L), STRAP
53	2-629-831-01	LID, DC
54	2-629-769-01	WINDOW, LCD
55	2-629-767-01	EYE CUP
56	2-629-833-01	SHEET, LCD ADHESIVE
57	2-629-834-01	LID, JK
58	X-2055-957-1	FRAME ASSY, LCD
59	X-2055-956-1	CABINET (REAR) ASSY
60	2-629-835-01	BRACKET (L), STRAP
LCD901	8-753-229-36	ACX336AK-3
LED901	1-479-015-11	BLOCK, LIGHT GUIDE PLATE (2.5)

5-1-3. MAIN SECTION

ns : not supplied



: BT251 (Lithium battery) MS-275 board on the mount position. (See page 4-48)

***Note** : Refer to the table of page 5-1 about language of SY-127 board.*

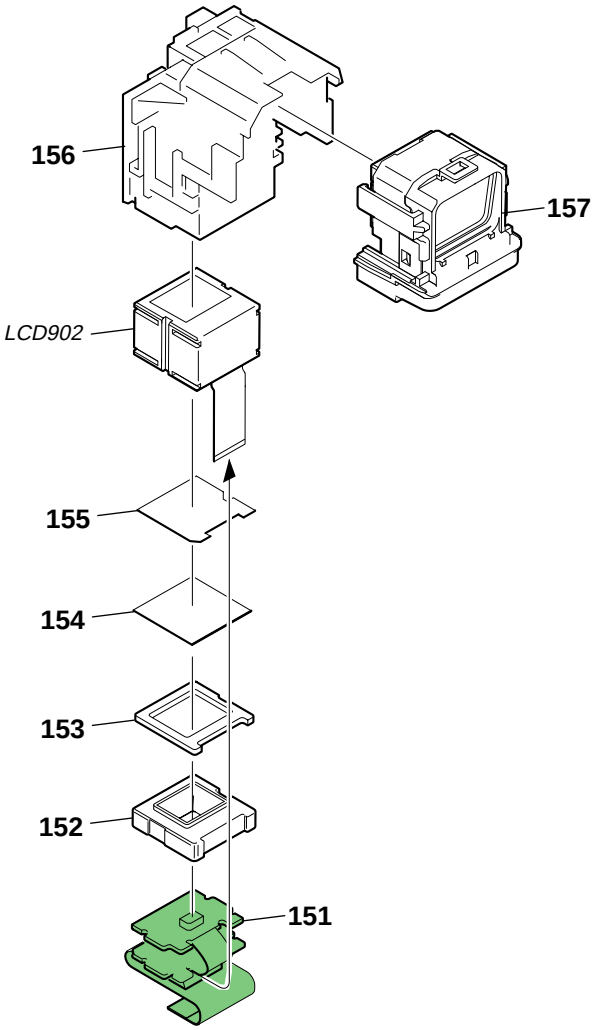
Ref. No.	Part No.	Description
101	X-2055-945-1	HOLDER ASSY, BATTERY
102	A-1119-327-A	MS-275 BOARD, COMPLETE
103	3-080-204-11	SCREW, TAPPING, P2
104	1-830-602-11	CABLE, FLEXIBLE FLAT (MS-029)
105	2-629-768-01	RETAINER, SP
106	2-630-230-01	LABEL, FUSE REPLACEMENT CAUTION
107	2-629-759-01	SHAFT, BT
108	2-629-760-01	SPRING, BT, OPEN
109	A-1127-774-A	SY-127 BOARD, COMPLETE (SERVICE) (GP1)
109	A-1127-775-A	SY-127 BOARD, COMPLETE (SERVICE) (GP2)
109	A-1127-776-A	SY-127 BOARD, COMPLETE (SERVICE) (GP3)
109	A-1127-777-A	SY-127 BOARD, COMPLETE (SERVICE) (GP4)
109	A-1127-778-A	SY-127 BOARD, COMPLETE (SERVICE) (GP5)
110	X-2059-858-1	LID ASSY (SERVICE), BT
SP901	1-825-923-41	LOUDSPEAKER (1.3CM)
⚠ BT251	1-528-999-61	BATTERY, LITHIUM SECONDARY
BT901	1-780-267-11	TERMINAL BOARD, BATTERY

Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note :
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

CAUTION :
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

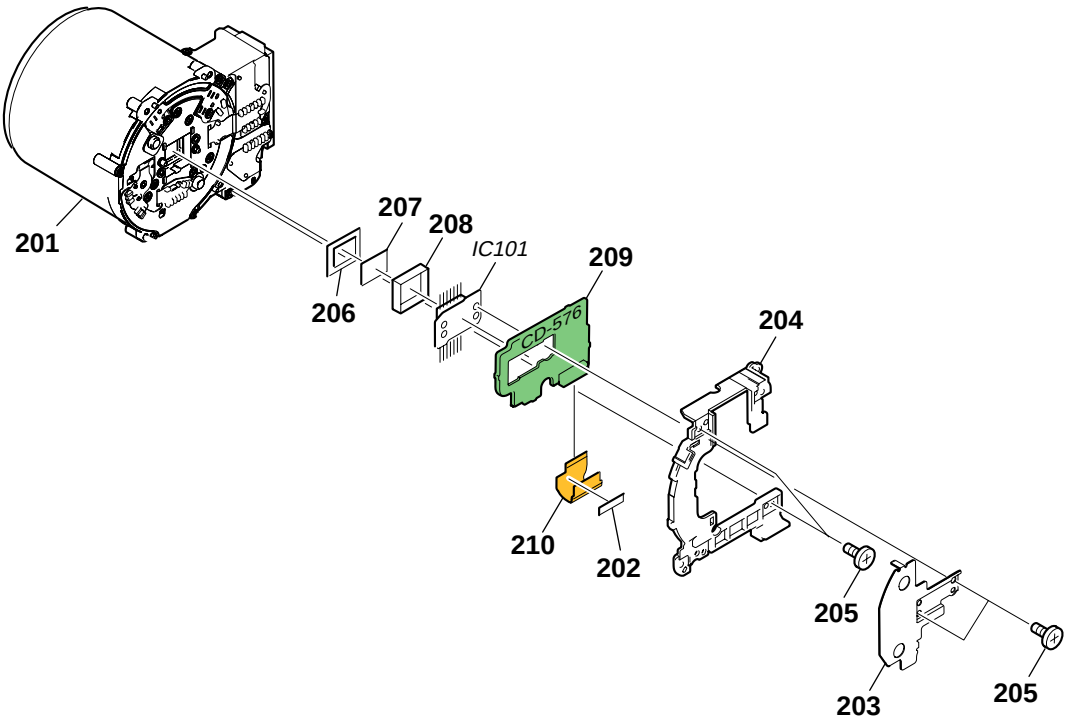
5-1-4. EVF SECTION



Ref. No.	Part No.	Description
151	A-1119-332-A	EV-016 BOARD, COMPLETE
152	3-089-447-01	GUIDE, LAMP
153	3-089-448-01	CUSHION, LB
154	3-089-445-01	ILLUMINATOR
155	3-089-446-01	SHEET, PRISM

Ref. No.	Part No.	Description
156	X-2055-959-1	HOLDER ASSY, LCD
157	X-2055-958-1	LENS ASSY, VF
LCD902	8-753-233-08	LCX067AKEB-1

5-1-5. LENS SECTION



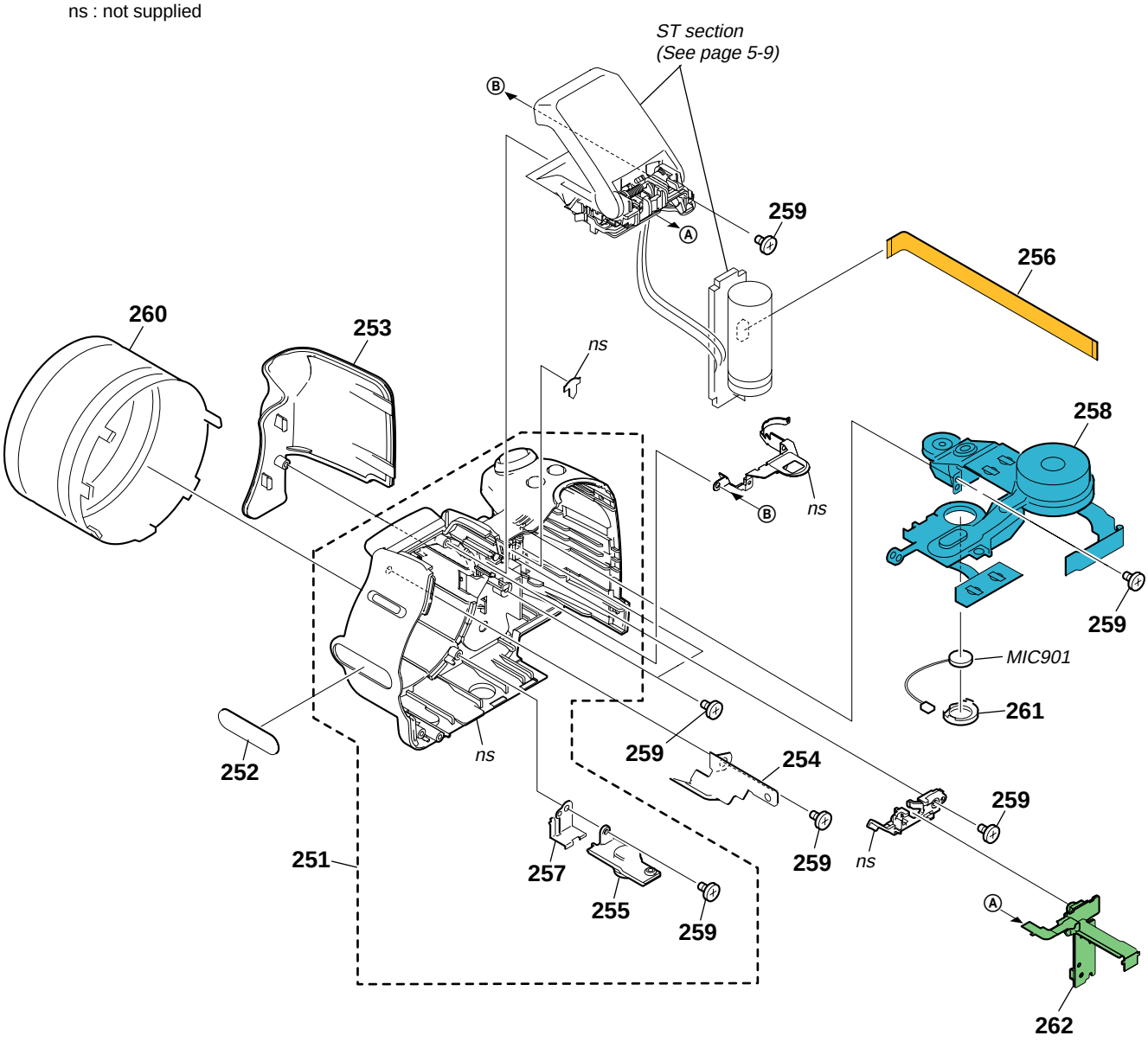
Ref. No.	Part No.	Description
201	A-1127-773-A	OPTICAL UNIT (B173A) (SERVICE)
202	2-631-861-01	SHEET (CD)
203	2-629-774-01	HEAT SINK, CCD
204	2-629-773-01	FRAME, LENS
205	3-078-890-21	SCREW, TAPPING

Ref. No.	Part No.	Description
206	2-592-605-01	RUBBER (TM), SEAL
207	1-788-298-11	OPTICAL FILTER BLOCK
208	2-592-693-01	PLATE (T), LIGHT INTERCEPTION
209	A-1119-326-A	CD-576 BOARD, COMPLETE (IC101 is not included in this COMPLETE board.)
210	1-867-126-11	FP-224 FLEXIBLE BOARD
IC101	A-1122-935-A	CCD BLOCK ASSY (CCD IMAGER) (IC101 is not included in this COMPLETE board of CD-576.)

Be sure to read “Precautions upon replacing CCD imager” on page 4-1 when changing the CCD imager.

5-1-6. CABINET(FRONT) SECTION

ns : not supplied

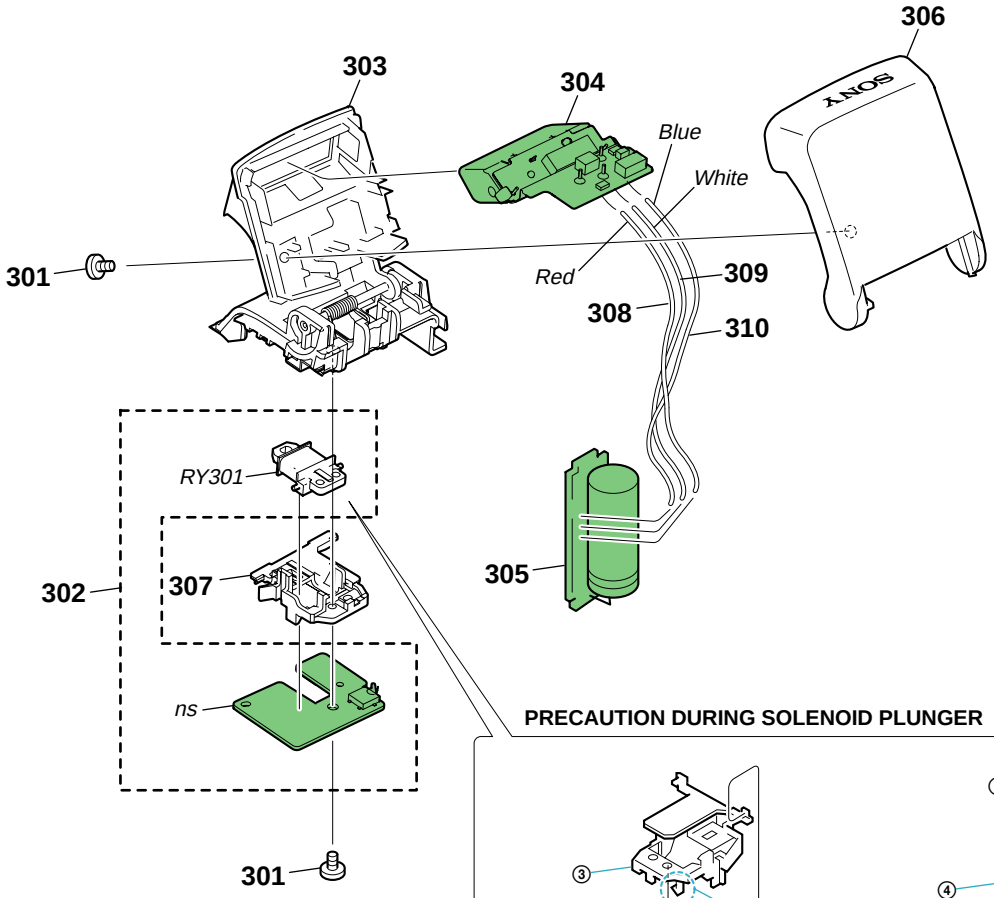


Ref. No.	Part No.	Description
251	X-2055-951-1	CABINET (FRONT) ASSY
252	2-629-813-01	PLATE, ORNAMENTAL
253	2-629-815-01	GRIP
254	2-629-812-01	SHEET METAL (R), STRAP
255	2-629-783-01	SCREW, TRIPOD

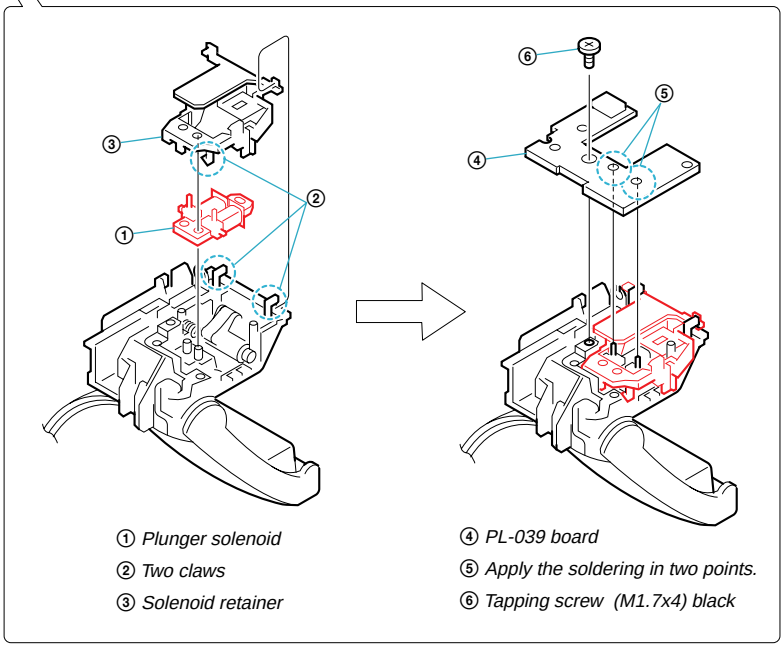
Ref. No.	Part No.	Description
256	1-830-603-11	CABLE, FLEXIBLE FLAT (ST-001)
257	2-629-781-01	PLATE (LENS), FRONT GROUND
258	1-479-260-11	SWITCH BLOCK, CONTROL (SW51780)
259	3-080-204-11	SCREW, TAPPING, P2
260	2-629-820-01	RING (W), LENS
261	2-629-817-01	HOLDER, MICROPHONE
262	A-1119-333-A	AF-102 FLEXIBLE BOARD, COMPLETE
MIC901	1-542-446-81	MICROPHONE

5. REPAIR PARTS LIST

5-1-7. ST SECTION



PRECAUTION DURING SOLENOID PLUNGER INSTALLATION



① *Plunger solenoid*
② *Two claws*
③ *Solenoid retainer*
④ *PL-039 board*
⑤ *Apply the soldering in two points.*
⑥ *Tapping screw (M1.7x4) black*

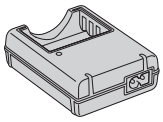
Ref. No.	Part No.	Description
301	3-080-204-11	SCREW, TAPPING, P2
302	A-1119-329-A	PL-039 BOARD, COMPLETE
303	X-2055-955-1	BASE ASSY, ST
304	A-1119-331-A	ST-124 BOARD, COMPLETE
305	A-1119-328-A	ST-123 BOARD, COMPLETE

Ref. No.	Part No.	Description
306	2-629-816-01	COVER, ST
307	2-629-818-01	RETAINER, SOLENOID
308	1-963-811-11	HARNESS (HA-001) (RED)
309	1-963-811-21	HARNESS (HA-001) (WHITE)
310	1-963-811-31	HARNESS (HA-001) (BLUE)
RY301	1-455-038-11	SOLENOID, PLUNGER

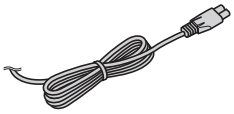
5. REPAIR PARTS LIST

Checking supplied accessories.

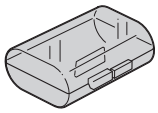
Make sure that the following accessories are supplied with your camcorder.



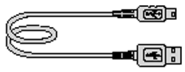
CHARGER, BATTERY (US,CND,J) (1)
1-479-378-11
BATTERY CHARGER (BC-CS2) (1)
(AEP,UK,E,AUS,HK,JE) (1)
1-479-378-21
BATTERY CHARGER (BC-CS2) (1)
(KR,CH)
1-479-378-31



CORD, POWER (1)
(US,CND)
1-790-107-42
CORD, POWER (1)
(AEP,E)
1-823-946-12
CORD, POWER (1)
(AUS)
1-827-945-12
POWER-SUPPLY CORD (1)
(KR)
1-823-947-12
CORD, POWER (1)
(UK,HK)
1-783-374-12
CORD, POWER (1)
(CH)
1-782-476-51
CORD, POWER (1)
(JE,J)
1-790-732-12

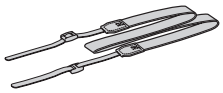


CASE, BATTERY CARRYING (1)
3-074-757-01

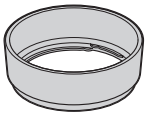


CORD WITH CONNECTOR (1)
(USB 5P)
1-827-038-11

CORD, CONNECTION (1)
1-824-519-11

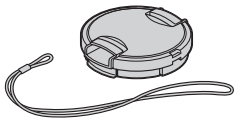


BELT, SHOULDER (1)
2-629-892-01

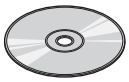


HOOD, LENS (1)
2-629-860-01

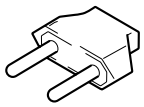
RING, ATTACHMENT (1)
2-629-861-01



CAP ASSY, LENS (1)
X-2055-960-1
STRING, CAP
3-979-194-31



C-S APPLI SOFT V1.6 (1)
2-583-853-01



ADAPTOR, CONVERSION 2P (1)
(JE,E)
1-573-856-12

- Abbreviation
  CND : Canadian model
  HK : Hong Kong model
  AUS : Australian model
  CH : Chinese model
  KR : Korea model
  JE : Tourist model
  J : Japanese model

Other accessories

2-629-893-01 INSTRUCTION (READ THIS FIRST) (JAPANESE)(J)
2-629-893-11 INSTRUCTION (READ THIS FIRST)(ENGLISH) (US,CND,AEP,UK,E,HK,AUS,JE)
2-629-893-21 INSTRUCTION (READ THIS FIRST) (FRENCH/ITALIAN) (CND,AEP)
2-629-893-31 INSTRUCTION (READ THIS FIRST) (SPANISH/PORTUGUESE)(AEP,E,JE)
2-629-893-41 INSTRUCTION (READ THIS FIRST) (GERMAN/DUTCH) (AEP)
2-629-893-51 INSTRUCTION (READ THIS FIRST) (TRADITIONAL CHINESE/SIMPLIEIED CHINESE)(E,HK,JE,CH)
2-629-893-61 INSTRUCTION (READ THIS FIRST) (RUSSIAN/SWEDISH) (AEP)
2-629-893-71 INSTRUCTION (READ THIS FIRST) (ARABIC/PERSIAN)(E)
2-629-893-81 INSTRUCTION (READ THIS FIRST) (KOREAN)(KR,JE)
2-629-893-91 INSTRUCTION (READ THIS FIRST) (POLISH/CZECH) (AEP)
2-629-894-11 INSTRUCTION (READ THIS FIRST) (HUNGARIAN/SLOVAK)(AEP)

2-629-895-01 INSTRUCTION (USER'S GUIDE) (JAPANESE)(J)
2-629-895-11 INSTRUCTION (USER'S GUIDE) (ENGLISH) (US,CND,AEP,UK,E,HK,AUS,JE)
2-629-895-21 INSTRUCTION (USER'S GUIDE) (FRENCH/ITALIAN) (CND,AEP)
2-629-895-31 INSTRUCTION (USER'S GUIDE) (SPANISH/PORTUGUESE)(AEP,E,JE)
2-629-895-41 INSTRUCTION (USER'S GUIDE) (GERMAN/DUTCH)(AEP)
2-629-895-51 INSTRUCTION (USER'S GUIDE) (TRADITIONAL CHINESE/SIMPLIEIED CHINESE)(E,HK,JE,CH)
2-629-895-61 INSTRUCTION (USER'S GUIDE) (RUSSIAN/SWEDISH) (AEP)
2-629-895-71 INSTRUCTION (USER'S GUIDE) (ARABIC/PERSIAN)(E)
2-629-895-81 INSTRUCTION (USER'S GUIDE) (KOREAN)(KR)
2-629-895-91 INSTRUCTION (USER'S GUIDE) (POLISH/CZECH)(AEP)
2-629-943-11 INSTRUCTION (USER'S GUIDE) (HUNGARIAN/SLOVAK) (AEP)

5-2. ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description			
	A-1119-333-A	AF-102 FLEXIBLE BOARD, COMPLETE			
		**********			
		(D001 and S001 are included in this COMPLETE board.)			
		< DIODE >			
D001	not supplied	DIODE DOR5073			
		< SWITCH >			
S001	not supplied	SWITCH, PUSH (1 KEY)			
	A-1119-326-A	CD-576 BOARD, COMPLETE			
		**********			
		(IC101 is not included in this COMPLETE board.)			
		< CAPACITOR >			
C101	1-164-943-81	CERAMIC CHIP	0.01uF	10%	16V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C107	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C109	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN101	1-817-544-31	CONNECTOR, FPC (ZIF) 39P			
		< IC >			
IC101	A-1122-935-A	CCD BLOCK ASSY (CCD IMAGER)			
		(IC101 is not included in this COMPLETE of CD-576 board.)			
IC102	8-753-230-85	IC CXA3691EN-T9			
		< TRANSISTOR >			
Q102	6-550-119-01	TRANSISTOR	DTC144EMT2L		
Q104	6-550-119-01	TRANSISTOR	DTC144EMT2L		
		< RESISTOR >			
R104	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R105	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R106	1-218-981-11	RES-CHIP	220K	5%	1/16W
R108	1-218-990-81	SHORT CHIP	0		
R109	1-218-982-11	RES-CHIP	270K	5%	1/16W
R110	1-218-989-11	RES-CHIP	1M	5%	1/16W
	A-1119-332-A	EV-016 FLEXIBLE BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
CN001	1-817-560-31	CONNECTOR, FPC (ZIP) 21P			
		< DIODE >			
D001	6-501-154-01	DIODE NSCW455AT-TY5			

Be sure to read “Precautions upon replacing CCD imager” on page 4-1 when changing the CCD imager.

Ref. No.	Part No.	Description			
	A-1119-327-A	MS-275 BOARD, COMPLETE			
		**********			
		< BATTERY >			
⚠ BT251	1-756-539-21	BATTERY, LITHIUM SECONDARY			
		< CAPACITOR >			
C252	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
		< CONNECTOR >			
CN251	1-816-644-31	FFC/FPC CONNECTOR (LIF) 12P			
CN252	1-815-572-71	CONNECTOR, MEMORY STICK			
		< FERRITE BEAD >			
FB251	1-400-807-21	BEAD, FERRITE (1005)			
FB252	1-400-807-21	BEAD, FERRITE (1005)			
FB253	1-400-807-21	BEAD, FERRITE (1005)			
FB254	1-400-807-21	BEAD, FERRITE (1005)			
		< RESISTOR >			
R251	1-218-990-81	SHORT CHIP	0		
R253	1-218-953-11	RES-CHIP	1K	5%	1/16W
	A-1119-329-A	PL-039 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C301	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
		< CONNECTOR >			
CN301	1-816-654-31	FFC/FPC CONNECTOR (LIF) 6P			
		< DIODE >			
D302	8-719-988-61	DIODE 1SS355TE-17			
		< RELAY >			
RY301	1-455-038-11	SOLENOID, PLUNGER			
		< SWITCH >			
S301	1-786-179-31	SWITCH, PUSH (1KEY)			

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

CAUTION :
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

Ref. No.	Part No.	Description			
	A-1119-328-A	ST-123 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C001	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
C002	1-100-506-91	CERAMIC CHIP	1uF	20%	6.3V
⚠C004	1-112-468-11	ELECT	205uF	99%	330V
C005	1-100-611-91	CERAMIC CHIP	22uF	20%	6.3V
		< CONNECTOR >			
CN001	1-816-644-31	FFC/FPC CONNECTOR (LIF) 12P			
		< DIODE >			
⚠D001	6-501-141-01	DIODE FT02P80TP			
		< IC >			
⚠IC001	6-707-555-01	IC TPS65552RGTR			
		< COIL >			
L001	1-456-499-11	INDUCTOR	4.7uH		
		< TRANSISTOR >			
⚠Q001	6-550-656-01	TRANSISTOR	CY25BAJ-8F-T23		
		< RESISTOR >			
R001	1-216-864-11	SHORT CHIP	0		
R002	1-243-975-81	METAL CHIP	4.7M	5%	1/16W
R003	1-218-935-11	RES-CHIP	33	5%	1/16W
		< TRANSFORMER >			
⚠T001	1-443-689-11	TRANSFORMER, D.C.-D.C.CONVERTER			
	A-1119-331-A	ST-124 FLEXIBLE BOARD, COMPLETE			
		**********			
⚠	1-479-261-11	FLASH UNIT			
		< CAPACITOR >			
C002	1-100-758-11	CERAMIC CHIP	0.047uF	10%	250V
C003	1-100-761-21	CERAMIC CHIP	0.01uF	10%	250V
		< DIODE >			
D001	6-500-811-01	DIODE RR255L-400TE25			
		< COIL >			
L001	1-456-193-11	COIL, TRIGGER			
		< RESISTOR >			
R001	1-216-121-11	RES-CHIP	1M	5%	1/10W
R002	1-216-097-11	RES-CHIP	100K	5%	1/10W

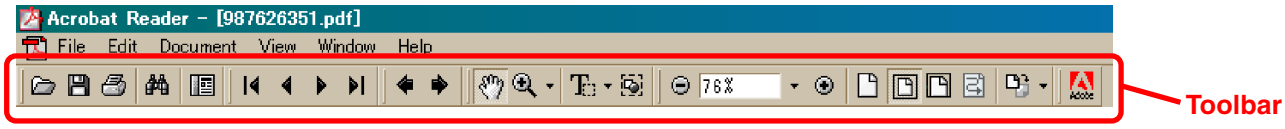
Ref. No.	Part No.	Description			
	A-1119-330-A	SW-447 BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C401	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
C402	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
C403	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C404	1-128-934-61	CERAMIC CHIP	0.33uF	10%	10V
C405	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C406	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C407	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C408	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C409	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C410	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C411	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C412	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C413	1-119-923-11	CERAMIC CHIP	0.047uF	10%	10V
C414	1-128-934-61	CERAMIC CHIP	0.33uF	10%	10V
C415	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C416	1-119-750-11	TANTAL. CHIP	22uF	20%	6.3V
		< CONNECTOR >			
CN451	1-818-046-11	FFC/CONNECTOR, FPC (LIF (NON-ZIF)) 20P			
CN452	1-818-619-21	CONNECTOR, FFC/FPC (ZIF) 6P			
		< DIODE >			
D451	8-719-056-23	DIODE MA2S111-(K8).SO			
D452	6-500-776-01	DIODE MAZW068H0LS0			
D455	8-719-064-07	DIODE SML-310LTT86			
		< IC >			
IC0401	8-759-489-19	IC uPC6756GR-8JG-E2			
		< COIL >			
L401	1-469-757-21	INDUCTOR	10uH		
		< TRANSISTOR >			
Q401	6-550-232-01	TRANSISTOR	2SA2029T2LQ/R		
Q402	6-550-119-01	TRANSISTOR	DTC144EMT2L		
		< RESISTOR >			
R401	1-218-969-11	RES-CHIP	22K	5%	1/16W
R402	1-218-969-11	RES-CHIP	22K	5%	1/16W
R403	1-218-967-11	RES-CHIP	15K	5%	1/16W
R404	1-218-989-11	RES-CHIP	1M	5%	1/16W
R405	1-218-965-11	RES-CHIP	10K	5%	1/16W
R406	1-218-989-11	RES-CHIP	1M	5%	1/16W
R407	1-218-965-11	RES-CHIP	10K	5%	1/16W
R408	1-218-967-11	RES-CHIP	15K	5%	1/16W
R409	1-218-969-11	RES-CHIP	22K	5%	1/16W
R410	1-218-969-11	RES-CHIP	22K	5%	1/16W

Note :	**Note :**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			
R411	1-218-953-11	RES-CHIP	1K	5%	1/16W
R412	1-218-973-11	RES-CHIP	47K	5%	1/16W
R453	1-208-671-11	METAL CHIP	330	0.5%	1/16W
R454	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
R455	1-218-970-11	RES-CHIP	27K	5%	1/16W
R456	1-218-970-11	RES-CHIP	27K	5%	1/16W
R457	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB451	1-234-376-21	RES, NETWORK	2.2K (1005X4)		
RB452	1-234-376-21	RES, NETWORK	2.2K (1005X4)		
		< SWITCH >			
S451	1-786-157-11	SWITCH, TACTILE (DISP)			
S452	1-786-157-11	SWITCH, TACTILE (MENU)			
S453	1-786-157-11	SWITCH, TACTILE (DUST)			
S454	1-786-157-11	SWITCH, TACTILE (LEFT)			
S455	1-786-525-31	TACTILE SWITCH (ZOOM T)			
S456	1-786-157-11	SWITCH, TACTILE (UP)			
S457	1-786-157-11	SWITCH, TACTILE (SET)			
S458	1-786-157-11	SWITCH, TACTILE (DOWN)			
S459	1-786-525-31	TACTILE SWITCH (ZOOM W)			
S460	1-786-157-11	SWITCH, TACTILE (RIGHT)			
		< SENSOR >			
SE401	1-476-807-31	SENSOR, ANGULAR VELOCITY (PITCH)			
SE402	1-476-807-41	SENSOR, ANGULAR VELOCITY (YAW)			
		SY-127 BOARD, COMPLETE			
		**********			

Electrical parts list of the SY-127 board are not shown.
Pages from 5-14 to 5-18 are not shown.

[Description of main button functions on toolbar of the Adobe Acrobat Reader Ver5.0 (for Windows)]



Printing a text

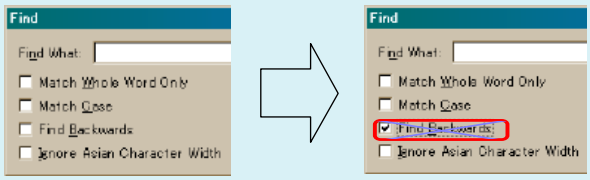
1. Click the Print button .
2. Specify a printer, print range, number of copies, and other options, and then click [OK].

Application of printing:
To set a range to be printed within a page, select the graphic selection tool and drag on the page to enclose a range to be printed, and then click the Print button.

Finding a text

1. Click the Find button .
2. Enter a character string to be found into a text box, and click the [Find]. (Specify the find options as necessary)

Application to the Service Manual:
To execute "find" from current page toward the previous pages, select the check box "Find Backward" and then click the "Find".



3. Open the find dialog box again, and click the [Find Again] and you can find the matched character strings displayed next. (Character strings entered previously are displayed as they are in the text box.)

Application to the Service Manual:
The parts on the drawing pages (block diagrams, circuit diagrams, printed circuit boards) and parts list pages in a text can be found using this find function. For example, find a Ref. No. of IC on the block diagram, and click the [Find Again] continuously, so that you can move to the Ref. No. of IC on the circuit diagram or printed circuit board diagram successively.
Note: The find function may not be applied to the Service Manual depending on the date of issue.

Switching a page

- To move to the first page, click the .
- To move to the last page, click the .
- To move to the previous page, click the .
- To move to the next page, click the .

Reversing the screens displayed once

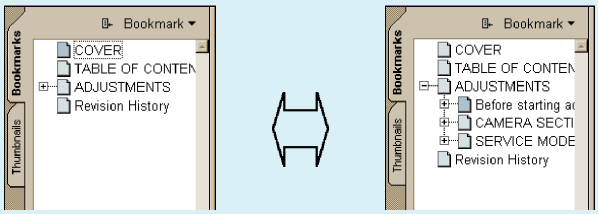
- To reverse the previous screens (operation) one by one, click the .
- To advance the reversed screens (operation) one by one, click the .

Application to the Service Manual:
This function allows you to go and back between circuit diagram and printed circuit board diagram, and accordingly it will be convenient for the voltage check.

Moving with link

1. Select either palm tool , zoom tool , text selection tool , or graphic selection tool .
2. Place the pointer in the position in a text where the link exists (such as a button on cover and the table of contents page, or blue characters on the removal flowchart page or drawing page), and the pointer will change to the forefinger form .
3. Then, click the link. (You will go to the link destination.)

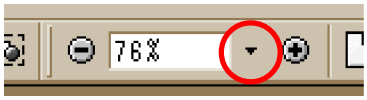
Moving with bookmark:
Click an item (text) on the bookmark pallet. and you can move to the link destination. Also, clicking can display the hidden items.
(To go back to original state, click)



Zooming or rotating the screen display

"Zoom in/out"

- Click the triangle button in the zoom control box to select the display magnification. Or, you may click or for zooming in or out.



"Rotate"

- Click rotate tool , and the page then rotates 90 degrees each.

Application to the Service Manual:
The printed circuit board diagram you see now can be changed to the same direction as the set.

Revision History

Ver.	Date	History	Contents	S.M. Rev. issued
1.0	2005.04	Official Release	—	—